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POINTS IN THE HISTORY

OF THE

GREEK AND INDO-SCYTHIAN KINGS

IN

Bactria, Cabul, and India,

AS ILLUSTRATED BY

DECYPHERING THE ANCIENT LEGENDS ON THEIR COINS:

TRANSLATED FROM THE GERMAN OF PROFESSOR LASSEN OF BONN,

BY T. H. EDW. ROEER,

DOCTOR OF PHILOSOPHY AND MEDICINE; MEMBER OF THE UNIVERSITY OF BERLIN:

AND THE TRANSLATION EDITED

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LASSEN'S BACTRIAN COINS.

Points in the History of the Greek, and Indo-Scythian Kings in Bactria, Cabul, and India, as illustrated by decyphering the ancient legends on their Coins. By CHRISTIAN LASSEN, *Bonn*, 1838.

The translation of this interesting and erudite work has been undertaken for the Journal by Dr. Roer, of the University of Berlin, a gentleman whom high acquirements, and sound knowledge of general literature, render fully competent for the task. The critical nature of much of the work calls for as close a rendering of the original as may be possibly given with reference to ordinary difference of idiom. Should the style therefore appear at times too German, it must be remembered that grace of expression has been voluntarily forfeited to secure what is so infinitely more valuable—as indeed it is the only real merit of a translation of this kind,—accuracy and fidelity as respects the original.

This work will, it is hoped, be generally welcome to our readers in its present form. It is invaluable to the historical student, and numismatist, while the extreme ingenuity exhibited in treating the subjects discussed, is such as to command the attention of the general reader. Founded as it is in a great measure on the researches published in this Journal by JAMES PRINSEP, we must receive it with pride, as a tribute to his genius, his singular intelligence, and indomitable zeal for the cause of knowledge, while with a more chastened feeling, we see in it honourably preserved the memory of one, who was for so many years the chief ornament of this Society, the recorder of its transactions, and the most eminent of all its members in many branches of science.

The translation will be continued in the Journal till the work is complete, a hundred copies of each paper being struck off above the number required for our circulation in order to supply the whole in the form of a book, to those who may desire a readier means of reference to its contents than the Journal might afford. I should mention, that I owe the notes signed H. T. P. to the kindness of Mr. Henry Thoby Prinsep.

INTRODUCTION.

Among the different empires which were formed on the dismemberment of the conquest of Alexander the Great, none were placed in a position more remarkable and peculiar, in a geographical and historical point of view, than the Greco-Bactrian kingdom, and the Indo-Grecian kingdoms, which found their origin in it. These were called into existence, when the course of those great historical events was already complete, by which the plastic, and intelligent genius of the Greeks had been united to that of the imaginative and pious, or according to the view of others, superstitious Orientals, and by amalgamation of the west with the east, produced a new formation of historical relations; viz., Hellenism. Though the Greek in Bactria proved still the strenuous soldier, inspired with the remembrances of the exploits of Alexander the Great, and his companions, yet he was no longer the rugged Macedonian of the old campaigns, full of local nationalism: for he had become, in the luxurious capitals of the Seleucidan kingdom, already too well accustomed to Oriental manners and modes of worship, and when proceeding from the banks of the Tigris and Orontes he reached the eastern parts of the Greco-Asiatic empire, he met there with natives already in a great degree acquainted with his peculiar customs and institutions. Thus the wounds received in the first fierce shock of jarring contrasts were already beginning to close.

Now as by the establishment of the Bactrian empire, the mighty process involving the formation of a new era was roughly completed, elements must have been admitted as agents in that process from the remotest east of Bactria and Sogdiana, congenial to those countries. The Bactrian was, as an inhabitant of the highland of Iran, far other than the Oriental of Syria, Egypt, or Asia Minor, and he was, even among the tribes of Iran, of a peculiar stamp. If any where, Zoroaster's doctrine of light must here have been preserved most purely, and thus in the amalgamation of Oriental and Hellenic character, Bactrian Hellenism must have been formed from the beginning in its own way, a smaller circle in the great revolution of the east.

But when the Greek power passed the Indian Caucasus, a new contact of the Greek character with the Oriental was the necessary consequence; there it met with an essentially Indian civilization, seldom affected by any foreign influence.

After Alexander had flashed like a radiant meteor through those Indian regions, they soon returned under the sway of Indian rulers, and this happened at a period when the power of a new Indian religious doctrine, viz. the Buddhistic, was about to propagate itself with zeal in this direction, together with political dominion. In consequence, the Greek kings of Bactria found in the valley of the Cabul river the peculiar characteristics of India more vigorous and more deep rooted than Alexander did before, and Hellenism* therefore was compelled to begin anew in a narrower circle, and on new ground, the same career it had already run through in a larger one. However, time and strength were wanting to carry out this last experiment. For as the Greek character, at such a distance from the reviving influence of its home, could not manifest itself in these remotest regions with the same degree of vigour as in the more western spheres of its activity, so it was here most early overthrown.

With the dominion of the Scythians over Bactria and on the borders of the Indus, the political influence of the Greeks was abolished for ever, and in the sphere of art that influence is only obvious in efforts, waning more and more, though it may be traced even among the Scythian Nomades.

Thus Bactria and the country to the south of the Caucasus appears as that territory in which Hellenism was first restrained from spreading to the east, and Asia proved here triumphant against the Greeks, but only as destructive of their systems, not as creative of others. For a longer period Greek influence continued to prevail in the empire of the Arsacides, the friends of the Greeks, who did not engage in warfare against Greek civilization, but only against the Roman spirit of subjugation, while the Sassanides called in the spiritual power of a revived

* Note.—It is proper to remark that this word is used in a peculiar sense by German writers, as referring to that moral and social state consequent on the union of Greek and Asiatic character at that period.—Trans.

religious doctrine to assist them in general opposition to all attacks from the west.

Upon no other ground than the above mentioned, on both sides of the Indian Caucasus, have the various forms of doctrine and life, which antiquity has produced, approached each other so nearly and so immediately, in successions alternately attractive or repulsive, vivifying or annihilatory. In Cabul the paths cross, which lead down through regions more and more torrid eastwards to tropical climates, which pass through Arachosia westwards to the mountain-valleys of the Iranians, to the plains of the Semites, and to the coast of the Javanese Sea, which traverse mountains of eternal snow northwards to Bactria, and as they separate, give the caravans a free passage to the pasturing plains of Tartary, to the remote towns of the peaceful Seres, and to the infinitely varied nations of the west; there met the worshippers of Zoroaster and Brahma, the apostles of the Buddhistic quietism, and the artists who opposed the plastic forms of the Hellenic gods, to the grotesque symbols of the east; here came together the cautious Banian with the merchant from China; and in the royal armies, Hindoos upon their elephants and the bowmen of Sacia halted near the serried Macedonian phalanx and the well ordered squadrons of Bactria.

On this cross road of historical formations was the Greek placed in Bactria. He was privileged at this post, most advanced to the east, as it were, to open with the right hand the Vedas of the Brahmans, and the Nosk of the Mazdajasnes; with the left, to shake the locks which closed the gates of the great Chinese wall, and the entrance into the empire of the "Central land." In our days has the western world first achieved a similar position; from a far greater distance indeed, yet though with infinitely more increased, and multiplied means, perhaps not with greater success? neither has the Chinese empire yet become more accessible, nor has Indian heathenism lost even an inch of ground.

These intimations may suffice to bring to mind the importance as respects universal history, which might be claimed for the history of the countries at the borders of the Oxus

and the Cabul river, from the time of the death of Alexander the Great to the expiration of the dominion of the Sassanides: on the other hand the succeeding history of these provinces under Mahommedan sway, is as cheerless as the Arabian desert.

The interest and importance of the Bactrian history will scarcely be disputed, although it appears far from being possible to trace this history, not in general shifting intimations, but in clear, lively, and distinct outlines; for our information about it is in inverse proportion to the importance which the Bactro-Grecian empire ought to enjoy in history. Bayer's* learned treatise has long ago proved, how little the Greek historians thought it worth while to pay attention to the fate of their own countrymen in the distant east. The geographical work of Strabo would be infinitely more valuable for the historian, if he had stated such facts as he knew, instead of giving some few detached, and confused notices on the Bactrian kings. I for my part, would willingly resign for this all his discussions on the Curetes, and many similar things.

Thus this history was hitherto only the subject of the laborious diligence of the learned collector, not of the narrating historian, and it will probably remain for a long time in this state; however, every hope of acquiring at a later period a firmer base and a more fertile field of inquiry is not lost. This hope rests upon the discoveries of the last few years, as well as upon the supposition, that their mine may not yet be exhausted.

Just a hundred years ago Bayer signed the preface of his acute treatise, and during the ensuing eighty years nothing appeared, that could have corrected or enlarged in any essential point his investigations. The history of the Bactrian Hellenes continued to be a catalogue of mere names of kings; a catalogue, as destitute of facts as laboriously arranged, and scarcely plausibly complete.

The last decad of years, and chiefly its latter half, has brought to light new monuments of that history, so unexpected and so valuable, that the hope above alluded to, seems not to be quite

* Historia Regni Græcorum Bactriani. Auctore Theophilo Sigifredo Bayero. Petropoli, MDCCXXXVIII. 4to.

fallacious. The external outlines of the Bactrian empire, and of those Indian states that originated in it, come out already more distinctly in connection with many detached facts of their internal formation. From things scarcely noticed, while the loss of written accounts on the fate of those empires, viz. the Bactrian, and the Indian, (for more to suppose, there was no reason) was lamented, even from those neglected things we have derived that unexpected benefit, and this from a quarter whence it was least hoped for. There have been found coins of those very kings at the seats of their former dominions in Bactria, on the banks of the Cabul river, and in North-western India. These are the most authentic sources we can desire, and what assistance coins may supply, where written accounts do not exist, has long been evident from the history of the Seleucides and Arsacides.

It is the design of the following pages to examine those newly acquired relics, in a light under which they have been hitherto looked on as least likely to afford results to the historical investigator. I do not intend to relate here the history of these newly cultivated numismatics, chiefly because my work is not to be a numismatical treatise. It is rather for the numismatical inquirer, who may hereafter compare all the coins of the Bactrian and Indian empires, and the Greek kings, to relate that history. Here the following outlines may suffice.

Since Bayer wrote, and before the last rich discoveries, some few single coins arrived in Europe by different ways, and were then published. Being merely unconnected, and scarcely supplying single deficiencies, they still excited the hope, that by degrees so much might be collected, as in time to yield more important advantages:—thus the coins received through Russia, which Koehler in Petersburg, and Tychsen* at Göttingen have described, and likewise those which were previously collected by Tod in India, and afterwards published in England.†

This state of things continued till the year 1834, when

* The latter in the Comentt. Recentt. Göttingg. v. VI. ct. phil.; the former in detached little treatises.

† In the transactions of the Asiatic Society of Great Britain and Ireland, vol. i, p. 313.

the celebrated French academician, Mr. Raoul-Rochette, published some new coins of the Greek Bactrian kings, and their Indo-Scythian successors, which were received by way of Russia.*

While he was editing that learned work, those investigations and discoveries had been already made, which have so much enlarged our knowledge, and will probably furnish us with still ampler stores.

At that period Burnes had already achieved the journey, by which the Indian Caucasus and Bactria were again opened to us. Nor had his journey been unprofitable for Bactrian numismatics, as the appendix to his well known work proves. But all these detached acquisitions are inferior to those which were effected at the same, or the immediately ensuing period in India; we shall briefly mention them. Three nations share in them.

The generals Ventura and Allard, as well as another officer, M. Court, three Frenchmen in the service of the Raja of the Sikhs, were first favoured with a rich crop by collecting on the spot, but chiefly by digging in the tombs which are called *topes*, particularly in the tope of Manikyala. An Englishman settled in Cabul, Mr. Masson, made further collections in the ruins of ancient towns of that country, out of hill-tombs, and by zealous inquiries in the bazars; at the same time a German from Vienna, Dr. Martin Honigberger, who travelled much about in the East, was successful in collecting by the purchasing coins and opening *topes*. These rich and surprising discoveries, published at short intervals, have excited among the English in India an increasing ardour of investigation, and the number of collectors is already too great to publish here the names of all. Upon these discoveries, and upon the hope of extending the inquiries to yet untouched seats of former civilization, is based the confidence, that our acquisitions are not yet closed.

* Notice sur quelques médailles greicques médites, appartenant à des rois inconnus de la Bactriane et de l'Inde, in the Journal des Sav. 1834, p. 328. Here are likewise enumerated the numismatic acquisitions made from the time of Bayer up to that period.

It will be necessary to specify more accurately the writings in which these discoveries are described, and the coins represented.

Mr. Masson has described his discoveries in three accounts,* his statements being of singular value, concerning the places of discovery, and the geography of some points in Cabul. His collection contains already more than 7000 coins, not all of which, however, refer to the Bactrian Greeks and to their Indo-Scythian successors. The interpretation of the coins, and the inferences joined to it, prove indeed, that Mr. Masson has not enjoyed a learned education; he is beside destitute in Cabul of all scientific materials; grateful therefore for such a laudable expenditure of time and labour, and for such a noble zeal, we shall not criticise his deficiencies, and willingly receive from him all that is capable of proof. Mr. Masson, I believe, served first in the artillery, and he knows certainly much better how to deal with numismatic inquiries, than most numismatists would know how to serve a gun.

The most instructive accounts from India on the newly discovered monuments of the Greco-Bactrian and Indo-Scythian period, we undoubtedly owe to Mr. James Prinsep, Secretary to the Asiatic Society in Calcutta. He has communicated to us continued accounts of all new discoveries, has carefully and accurately edited the coins, and has, with great diligence and acuteness, tried to explain them, and by demonstrating the connexion between the Indian and the Indo-Scythian numismatics, first established an entirely unexpected new and important fact. His decypherings of the native medalography, and his interpretations of the native legends in Greek characters, leave to succeeding inquirers only the task of rectifying and defining more precisely a few isolated points. He deserves the higher praise, as he is his own teacher in the province of numismatics, originally foreign to his studies. His beautiful discoveries in the old Indian paleography, concern, more nearly than he perhaps presumed himself, the explanation of the Bactrian coins, and we are entitled to expect still richer contributions from his ardour.

* In the Journal of the Asiatic Society of Bengal, vol. iii p. 152, with engravings, which leave much to be desired.

By his treatises, published in the above-mentioned Journal, we are best able to observe the course, and the gradual increase of those discoveries.*

The collection made by Dr. Honigberger, as well as that of General Allard, and a portion of Ventura's collection, have been brought to Paris, where Mr. Raoul-Rochette edited and described them.† Mr. Raoul-Rochette is so well known to all European learned men as a solid and acute inquirer into antiquity, as well as an experienced and judicious connoisseur of ancient art, that I need hardly declare that the explanation of those coins could not have been intrusted to more skilful hands. He who is not a numismatist, will be doubly obliged to him for the exactness with which he exhibits every trace of historical references, preserved in the coins.

Though the Germans could not share in editing the coins, yet they have been fellow-labourers, as well in the collecting, as in the interpreting of them. I have to mention here two learned men,—Mr. K. O. Mueller, at Göttingen, who had already published‡ a detailed account, full of striking remarks, on the newly acquired coins. But of much greater importance is his lately published treatise on Indo-Grecian coins.§ It is an example as clear as solid, of the new results which the history of those countries has gained by those coins.

* They are chiefly the following, vol. III. p. 313. On the coins and relics, discovered by M. le Chevalier Ventura, in the tope of Manikyala. P. 436. Continuation of observations on the coins and relics, &c. at the same place, p. 562. Notes on the coins, discovered by M. Court, vol. III. IV. p. 317. Further notes and drawings of Bactrian and Indo-Scythic coins; at the same place, p. 621. p. 668. On the connection of various ancient Hindoo coins with the Grecian or Indo-Scythic series. vol. V. p. 548. New varieties of Bactrian coins from Mr. Masson's drawings, and other sources; at the same place, p. 639. New varieties of the Mithraic or Indo-Scythic series of coins and their imitations; at the same place, p. 720. New types of Bactrian and Indo-Scythic coins.

† Supplément à la notice, etc. Journ. des Sav. 1835. Deuxième supplément à la notice, etc. at the same place, 1836. Both likewise in a separate edition, after which I shall make the citations.

‡ Goettingen Anzeigen. 1835. No. 177. p. 1761.

§ At the same place, 1838. No. 21. p. 201.

Dr. Grotefend, from whom we have since received an excellent essay on the decyphering of the Celtiberic alphabet, had proved already, by his work on the unknown writing of the Bactrian coins,* that he possessed the zeal and talent to aspire after the fame his worthy father had acquired in the art of decyphering;—his work having been independent of that of Mr. Prinsep, is a direct recommendation of their labours, as both have obtained almost similar results. I shall shortly mention, what still may be amended in them.

It is then the design of the following work, to rectify and enlarge the decyphering of the alphabet; to define the language of the native words imprinted on the coins; and to illustrate the relics of the written history of the Bactro-Indian kingdoms, according to a paleographic and philological view.

The author being no numismatist, does not conceal to himself, that he cannot depend upon his own judgment in numismatic investigations. However, for this part of the explanation of the Bactrian coins, he was so much prepared by the preceding works, that he was, while at work, but seldom sensible of the insufficiency of his knowledge in this respect. Should he sometimes have ventured to recede from the inferences of the numismatists, they will, he hopes, excuse him for this little deviation from their authority if, on the other hand, he may succeed in completing in some instances their inferences by his investigations; for perhaps few of them will be familiar with those authorities by means of which he proposes attempting to advance the whole subject a step further.

As the Bactrian empire was placed in the centre of communication, crossing from west and east, from north and south, the modes of research for interpretation of its documents and restoration of its history, must unite from various parts, in order to complete the investigation. The Grecian, the old Persian, the old Indian, and the Chinese philologies meeting here, in close contact, must mutually supply their respective deficiencies.

I shall now more distinctly define the subject of my work.

* Blaetter zur Muenzkunde (leaves on Numismatics) 1836. No. 26.

When we meet upon the coins with legends of a twofold writing, viz., a Grecian and another unknown, we dare positively assert, that the names written on the one side in Grecian characters, must be repeated on the reverse. From this point of view Messrs. Prinsep and Grotefend have also found the alphabet, which I have to rectify only in a few points; for in the main point the decyphering of the alphabet is already completed.

If I may be allowed to state beforehand, in what respect both have been mistaken, it appears to be the following:—Neither of them has succeeded in the choice of words to explain the appellatives in the native language, in consequence of which, both have adopted some spurious letters. Mr. Grotefend had not at his command coins enough to observe this mistake in the application of these words to proper names; besides, the legends have become so indistinct, that without comparing many copies, it is often impossible to find the real shape of some letters, or the proper native orthography. Mr. Grotefend appears in general not to have borne in mind, that the native language might be of such a nature as to require an orthography different from the Grecian, and he therefore adapts also the vowels to the latter, though the native writing has its proper system of denoting vowels, from which it is not allowed to depart.

Mr. Prinsep has arrived at this system; but as he does not apply it with sufficient exactness, he is mistaken in the reading of an important letter, and obstructs his own way to an accurate knowledge of the native language. Though he is quite correct in supposing, that the native orthography must not always copy every Grecian letter, yet, he does not accurately define the nature of those deviations, and is too easily satisfied with a groundless difference in the orthography.

With regard to some letters, the proposed alphabets present also differences in shape too great to allow their adoption, without a more careful examination.

It would be unjust to mention this censure, without adding at the same time, that my alphabet is entirely grounded upon that of my predecessors, and that the merit of the real decyphering is due to them.

FIRST PART.

DECYPHERING.

Fundamentals of Decyphering.

I first put together a number of letters, about which there cannot be any doubt, and which have been read in the same way by Messrs. Prinsep and Grotefend; to these I shall add some others, concerning which I differ in opinion from one or the other, and I shall state my reasons. In connection with this, I shall make some previous inferences, as well on the character of the alphabet, as of the language.

1. 𐎠, A. This is established from the names Apollodotos, Antialkides, Antimachos, Azes, and Amyntas, in which it is the first symbol. Mr. Prinsep observes this letter to be written as only initial.* This is so far to be limited, that it is only written when the syllable commences with A, just as अ in the Indian alphabets; for in the name Antialkides, we find 𐎠 in the middle of a word, according to Mr. Prinsep's own latter remark.† Mr. Grotefend, according to the coins, has stated four varieties of the shape, but they are all really the same, and well preserved copies represent only the foregoing character.

After a consonant which has the vowel, A 𐎠 is never met with, from which we infer, that the sound A is accounted inherent in the consonant, and is not represented by an express symbol. On the other hand, we shall find *proper symbols* of vowels, whenever a consonant is followed by any other letter than A; it appears here, therefore, the same system of orthography as in the Indian alphabets, and in the arrow-headed writing. For the omission of A, when the syllable has a final consonant, and for which the Indian alphabet has adopted the symbol of pause *(Virâma)*, there is not found any symbol in our legends, as it does not occur in the arrow-headed writing.

2. 𐎢, O. This symbol occupies always, (with the excep-

* As. Jour. No. v. p. 722. † As. Jour. No. iv. p. 329.

tion of a single word, viz. the name in the native legend upon the coin of Agathokles,) the final place of a word; all authentic words do also end in 𐨯. Hence, because O is the termination of the nominative singular masculine in the Zend, and because an omicron occupies the final place whenever native words are rendered by Grecian letters, as for instance 𐨯AO, KOPANO, Mr. Prinsep infers,* that 𐨯 must be the same with O. Mr. Grotefend has arrived at the same result, and has noted eight varieties of the symbol, two of which will prove genuine, (the fourth and fifth), the others, however, are partly mutilations, partly real, but indifferent deviations. In accordance with Mr. Prinsep, I can admit only two varieties. 𐨯 appears† often with a small cross line below, a peculiarity, which, however, will recur in many other letters. But whether the round above be closed or not, is quite incidental.

To the reasons alleged by Mr. Prinsep, I add also, that the most common dialect of the Prâcrit, instead of the A of the Sanscrit, substitutes likewise ô in the nominative sing. masc. This is indeed the case only with masculine words, ending in A; but they form, as well in Zend, as in Sanscrit and Prâcrit, by far the most numerous class of words. This nominative, therefore, refers also to India, as the native country of the Zend, and decides nothing about the language upon the coins.

Whether 𐨯 must be read as ô long, or as short o, *a+u*, is not easily to be decided. The Sanscrit has but a long ô (compound of a + u). In the Zend, ô is likewise a diphthong, to be considered as the coalescence of a and u, though one of both forms of ô may have been shortened in the pronunciation; for

* As. Jour. No. iv. p. 329.

† For a long time Mr. James Prinsep, with Mr. Grotefend and the author of this essay, read the character 𐨭 as a form of the 𐨪 u or ô, but he latterly rejected this reading, and adopted the Sanscrit genitive as A instead of the Zend one of O. The character was universal as a final of names, and was evidently an inflection. The reasons for his reading 𐨭 as an S will be found in pages 642 and 643, vol. vii of the Journal, that is, in the Journal for July, 1838.

Mr. Lassen has admitted his preference of the reading of this letter as S, in a letter to Mr. Prinsep we shall presently quote at length.—H. T. P.

it appears in instances where the Sanscrit renders A by the Greek O for instance, Bharait (Bharêt) Zd. Barôit, Gr. φέροι.

The long ô of Sanscrit is generally kept in Prâcrit,* particularly in the terminations, though the shortening of this vowel must be admitted in some instances. The contiguous languages, (for I scarcely need to say that the language upon the coins must among those three meet with its relation) seem to coincide in proving the 𐨯 to be ô. That 𐨯 cannot be an entirely short O is evident from the fact, that the Greek omicron is never rendered by 𐨯, as for instance in Apollodotos. But because for the termination 𐨯 the Grecian paraphrase puts also an O, this intimates, undoubtedly, that the pronunciation of 𐨯 is at least shortened in the terminations.

For the above reading of the letter 𐨯 I could not plead its use in the legend upon the Agothokleian coins, for the authenticity of the word is not quite settled. Mr. Prinsep supposes this legend to consist of two words, both ending in 𐨯; I rather think it a Greek word, in which 𐨯 would correspond to ω. The Parthic name *Vonones*† requires ω in the second syllable, according to Grecian orthography; however, the native representation of this name is matter for discussion, which cannot be entered upon at present, I shall therefore be satisfied now to denote 𐨯 by ô, and with the above mentioned restriction, I think it long 𐨯.

3. 𐨪 M. The fixing of this letter belongs to both my predecessors, and is confirmed by the names Antimachos, Menandros, Hermaios, Diomedes, and Amyntas.

The symbol often has below the small cross line 𐨪 already alluded to; it may even be connected with the main figure by a perpendicular line 𐨪

The form 𐨫 occurs for the syllable ME in Menandros, for MH in Diomedes, for MY in Amyntas.

From the name Menandros, and from the application of this symbol to other consonants, followed by the vowel é, Mr. Prinsep has inferred, that the perpendicular line must be the sign of short è. This opinion is certainly right, and will be

* My Grammar, p. 150.

† The noting of Vonones has been given up by Mr. Lassen.

fully confirmed. The i, following consonants, is always represented by this line, which, in favour of the figure of some consonants, is rendered also obliquely. In similar manner the e or i in this place is denoted in the old Indian alphabets by a mark above, connected with the consonants. Mr. Grotefend, following the Greek alphabet, has incorrectly adopted a as the representative of the vowel in ψ; if this be so, the same sign must represent y in Amyntas, ê in Diomedes, and i, if there is i in the Greek, as for instance, with 𐤉 in Antimachos. It is evident, that it always is the same vowel, which did not sound differently in different words, but is always i, and that the native language substituted the same one for those four Greek vowels together; this supposition agrees also much better with the nature of those languages. They all reject the υ; in consequence, we find ψ in Amyntas, as it was the sound, most congenial to the ear. When upon the coins Dijamidô is written for *Diomedes*, we ascribe it to the pronunciation of the η as an i, which already had stolen in; the vowel, however, in this instance must be long. But because we also do not find the long A differing in orthography from the short A, the objection taken, that our line is likewise substituted for a long ɪ, will be of no consequence.

The position holds good, when the vowel-line may represent ε. Why was ê not written for ĕ, seeing that we observed before, that 𐤐 though really ô, is still sometimes put for ŏ? Now just, because the language has an ô, I am inclined to infer, that it had also an ê.* He who is acquainted with the analogy of languages used in lands contiguous (to Bactria,) will admit of the inference. In the Sanscrit there is no ĕ, but there is an ē; on the other hand, the Zend has even three ès (ĕ, è,ê,) the first of which is decidedly a short vowel; lastly, there is an ē in the Prâcrit,† which is still more frequently shortened than ô, but being shortened, alternates with i. In the Zend, the manuscripts give also sometimes i for ĕ; but otherwise the ĕ is not related to i. Why then was the sign e not written for the Greek ε, if that sound was to be

* I have above endeavoured to express the German sound of ê by A which it resembles: I shall hereafter leave it as it is.

† Vide my Grammar.

met with in that language? That this was not the case, the names Philoxenos and Hermaios will hereafter prove. The native ê must have been considered too grave to be equivalent to the light Greek ε; the written characters at least had not an ê, as evident from its not having been used in the above named instances; consequently there remains scarcely any other course than to write i. For the principle of Historical Comparative Grammar, under which in Zend and Greek, ĕ would be produced by shortening an original ă, cannot be applied to words, written down* from merely hearing them pronounced. We might rather here apply the analogy of the Prâcrit, which seeks to substitute an ĭ for the shortened ê, as in shortening the sound ê, produced by the coalition of a and i, the element i prevails.

Were the language upon the coins Zend, we must expect an ĕ; but if it were the dialect of a country upon the Indian side of the Hindu Koosh, we should not be surprised by falling in with the Indian system of vowels.

On the fact, that upon the coins, i only is always substituted for the four Greek vowels ε, ι, η, υ, or for the sounds a, e, ee, y, I ground the proposition, that the mode of writing Greek names was based upon the system of native sounds, according to which the foreign names were changed. It is included in this proposition, that it will by no means be necessary to refer in every peculiarity (observable in the native character), to Grecian orthography. Should we misapprehend this principle, we should run the risk of thinking we recognized the native characters in incorrect positions.

4. 𐎐 P. Apollodotos is sufficient to establish this letter. Both my predecessors have already adopted it. In Philoxenus also occurs the initial 𐎐, from which it is evident, that, the Greek φ not being in the native language, P was substituted for it; the Zend, and the old Persian have f, the Sanscrit and Prâcrit only ph, or P, with a prolonged aspiration. By the want of f in the language upon the coins, we may observe an affinity to the character of the Indian languages, and a diversity from that of Iran. But because there was no letter corresponding to the Greek φ, it still does not follow, that f did not

* As they would be in the language under consideration.—Trans.

exist; this cannot be clearly ascertained, until after the examination of the un-Grecian names Unadpherres and Kadphises; for the Greek φ will be only the representative of an f in them.

I observe on this occasion, that thrice in the native legends no vowel sign occurs for the o in Apollodotos, but only the consonant with its inherent a. Though it follows from this, that the language of the coins owned not a pure ŏ, yet we must also bear in mind, that as now in some Indian dialects, so the ă, as pronounced of old, when occurring in middle syllables, approached to the pronunciation of o. Though we otherwise had to expect to find the Greek ω rendered by u (oo), we nevertheless observe it once only upon these coins, and even there it is not certain. On the other hand, in the merely Indian alphabet of the coins of Agathocles *omicron* is represented by u (oo).

I maintained, that 𑀧 was the initial in the name Philoxenos. Where then is the i (ee)? on the copy R. R. II. No. 5 we distinctly observe the trace of i, as the sign 𑀺 appears there. It is therefore to be restored as 𑀧𑀺. The other copies, R. R. II. No. 6 As. Trans. Vol. IV. Pl. XXI. No. 2. have indeed only got 𑀧, pa, but the state of the coins proves, that a part of the character may have been effaced. A fourth coin (As. Trans. Vol. IV. Pl. XXI. No. 1) is so much spoiled in its initials, that no use can be made of it. 𑀧𑀺 for pi will afterwards sufficiently be proved.

5. 𑀮 is for lo in Apollodotos, 𑀮𑀺 for li in Azilises, and for ly in Lysias. It is superfluous to repeat here the discussion on this vowel sign. I likewise adopt the l from my predecessors.

In the name Antialkides, there occurs an 𑀮𑀺, though in Greek l is without a vowel. From this circumstance, however, we do not consider 𑀮𑀺 as a variety of 𑀮, but here evidently is a transformation of the Greek name according to the rules of native sounds. The important consequences on this remark, here only hinted at, will be proved hereafter.

On the character itself, I shall only observe, that the small perpendicular line on the left hand is sometimes turned upwards; at least, if As. Trans. Vol. IV. Pl. XXI. No. 1. the apparently well preserved word, by which ἀνίκητος is expressed, is faithfully represented by Mr. Prinsep. But the form I have

adopted is most prevalent; we are not yet sufficiently prepared to enter into full discussion on the ⊕, which denotes lo in Philoxenos.

6. ר, t and ד, d. It is difficult to distinguish these two symbols, and they are so often confounded, that we might take one for the other. We might be even induced to think, that the language of the coins did not distinguish between t and d, that it perhaps always changed an* independent t into d, as the common Prâcrit does, or an independent d into t, as the Paizâki dialect of the Prâcrit,† assigned (as a spoken tongue) to tracts immediately under the Himalaya, and in the Punjab.‡ But let us cite some facts.

The same symbol for t and d occurs in R. R. I. No. 7; there is at least no essential difference, though the i with t is of course represented ר.

As. Trans. Vol. IV. Pl. XXV. No. 9, the ti is almost χ, while the d is nearly an angle; at the same place, No. 10, the t is effaced, and indistinct; we find again upon No. 11, t and d quite similar; d has only got the small cross-line we already observed with ר and which never denotes a difference. In t (ti) and d in Antialkides, As. Trans. Vol. IV. Pl. XXVI. No. 9, and No. 10, t is in both instances more crooked, while d appears quite angular; on No. 11 they are both alike, and the i in ti is effaced. The t in Antimachos is likewise more curved, and serpentine. As. Trans. Vol. IV. Pl. XXI. No. 3 and No. 4. The t in Amyntas, As. Trans. Vol. Pl. XLVI. No. I. is quite angular, as d in other cases, in Diomedes. As. Trans. Vol. V. Pl. XXXVI. No. 3, the upper part of d has quite disappeared. Apollodotos finally puts t and d close together. As. Trans. Vol. IV. Pl. XXVI. No. 4. gives to t almost the angular form of d, while d is entirely rounded. No. 5 represents the regular d, but a much distorted t; in the same manner, No. 7; and No. 6 is of no use as authority; No. 8 gives t in the angular form with the small cross—besides, there is above at the left

* Vide my grammar, p. 442.

† At the same place p. 15.

‡ The reference by Prof. Lassen to his grammar (which I have not) would explain the expression, which I am otherwise unable to gain the force of.—TRANS.

angle a small line, turned upwards; the d is here more open than an obtuse angle of 100°. The small line, shooting up to the left, is however met with (R. R. II. No. 14, No. 13) likewise in d, which here completely assumes the form of t, while the t has become more slender, and more like a straight line.

This uncertainty in the character does not only occur upon the older coins which represent a native writing, less carefully executed; for though, according to Mr. Prinsep's remark, it becomes more distinct and exact in process of time, still the same difficulty in distinguishing precisely d and t occurs upon the well preserved coins of Azes. Thus upon the coin, As. Trans. IV. Pl. XXII. No. 10, No. 1, where the t of the word *mahatô* (great) takes in both the angular form of d, once with the cross-line below, the second time with the final stroke above, shooting out (𐨗), while there is upon a third coin (No. 2) a t with a final stroke, turned upwards to the left (𐨗).

If therefore a distinction between both letters is to be made, we are at a loss what characters belong to either of them. Since we are now only in search of the language, and the writing gives us no explanation itself, I only know one way to come to a conclusion. It is indeed proper to read, with regard to names, according to the Greek, because there is evidently a tendency to distinguish t and d from one another; but this tendency may here be attributed to the influence of the foreign names of kings, and it decides therefore nothing about the original rule of sounds in the language. For this the analogy of what occurs in other organs would be the strongest criterion; if p and b, k and g, be likewise not distinguished, we can maintain this as being both t and d. We therefore shall defer the decision of the question as to whether in the language of our coins, the different grades of consonants were confounded.

Mr. Prinsep has explicitly noticed the uncertainty of the characters; Mr. Grotefend gives evidence of it in his alphabet, and adds to d some entirely deviating forms. In order not to copy in printing all those little varieties, I have always put for t, 𐨗, for ti, 𐨟, for d, 𐨘, and for di, 𐨠, when I adopted the one or the other according to Greek, or from internal evidence; but a final decision must by no means be anticipated, as to this point.

Lastly, in discussing this question, the great similarity of t and d with r must be kept in sight, so that it becomes very difficult to distinguish them; however, it would lead to an extreme conclusion to throw these three letters in the same mould.

8. 𐤍 n. For this Mr. Prinsep adopts ε; so does Mr. Grotefend, who adds besides five other entirely different characters, as representing n; but they have been produced from mistakes in reading, as will be proved hereafter; ε occurs indeed in the syllable na of the name Menandros upon many coins; As. Trans. Vol. IV. Pl. XXXVI. No. 1 has ε; on the other hand, No. 2. a. b. has my character. No. 3. likewise has it, only a little distorted; also As. Trans. Vol. V. Pl. XLVI. No. 5 and No. 8. particularly the latter, where the curvature is more prominent than in my character, and a point is superadded (𐤍) At the same place, No. 6 has indeed the character as exhibited by Messrs. Prinsep and Grotefend. At R. R. I. No. 12, the form is quite indistinct, also No. 8. No. 9; at No. 10, the drawer seems to have been incorrect. The copy, according to Tod,* is of much less use. In Philoxenos, As. Trans. IV. Pl. XXI. No. 1, my symbol occurs; No. 2 has got the other R. R. II, No. 6 some mixture of both.

The cross-line below, being proved to be an unmeaning ornament, we have in fact but to choose between 𐤍 and ε; and these appear to me varieties only of the same character, according as the middle part of the letter was bent in another way. But since the figure ε occurs also in instances, where it cannot be n, I preferred the figure 𐤍 for the type.

It might be supposed that, because n appears so often, the distinction was to be easily effected, and the foregoing discussion therefore might be quite superseded. For we have also to expect n in Antialkides, in Antimachos, and in Amyntas. But on looking for n in the corresponding places, we find nothing at all, and it must be directly evident to the unprejudiced inquirer, that *here* the letter n was not expressed, viz. not before t, at least not by a symbol, placed in the line. As to the supposition, however, that the point (𐤍) near 𐤍, often

* Trans. of the R. A. S. vol. I. p. XII. No. 2.

recurring in the name of Menandros, might denote the nasal sound, in like manner as in the Indian orthography a point, viz. the Anusvâra, represents a nasal sound (सं Sanscrit संतः, santah), there are two objections; first, the point is met with in situations, where a nasal sound can by no means be expected, as for instance directly with the following letter in Menandros, where it is placed on the left ξ (As. Trans. Vol. v. Pl. XLVI. No. 8) and secondly, after ϒ (at the same place) where it could only denote an â.

The name Menandros never exhibits the second n, and for dr there is but one symbol. Mr. Grotefend seems to be of opinion, that the last half was omitted, and Menan only extant, but the termination ὁ is always found, and the name is complete according to the native orthography. There must have been therefore, besides the omission of n before d, which is established beyond doubt by the analogous omission before t, a further alteration of the name. This may suffice for preparatory observation.

9. For Χ in Antimachos the figure ⊆ occurs (R.R. II. No. 4. and As. Trans. Vol. IV. Pl. XXI. No. 3): at the same place upon No. 4, the character being a little obliterated, is like a ך. I shall write kh; the fixing of this letter is due to both my predecessors.

10. ϒ is accounted by Mr. Prinsep as a variety of l, though he likewise was about to explain it by h.* He can adduce authority for l, only in the native word for *king*, which he proposes to read *malakáo*, without giving an explanation, as to how this Semitic word may have crept into this place. The proposition to read this word as *maharaó*, he afterwards disapproves of. Mr. Grotefend, however, reads it thus, and he is certainly right with reference to h. But in order not to be hasty in deciding a point so important (for by reading h we render the language decidedly Indian, and exclude the Zend) let us look for a name, in which h occurs. Hermaios is most proper for this end, because the h is initial; we only have to premise, that it must also exhibit the symbol of i, i being

* As. T. IV. 331.

substituted for ε. Now the name (R. R. I No. 13) distinctly commences with X; likewise (As. Trans. Vol. IV. Pl. XXIV. No. 3) at the same place No. 1 has i quite distinctly, with the reservation, that the lower curve of the h is lost, and if the coin be not put in proper position, the last letter appears too erect, while the real position of h would appear to incline to a slope. Upon No. 2 the h is effaced, upon No. 4 distorted, and the i has disappeared. The coin (As. Trans. Vol. v. Pl. XXXV. No. 11) is distinct, but h here also is in a more erect position than it occurs in usually.

The 𐨪 often recurs in the title of king, and the beautiful Azes coins define the character, while the native word for *great* will sufficiently confirm us in reading it h; X as hi is equally evident.

11. The symbol, subsequent to hi, and placed before m upon the above named coins of Hermaios, is more or less similar to a t; but since it must be an r, the great similarity of both, before already alluded to, is evinced by it. Both my predecessors also acknowledge the r in the figure 𐨫; Mr. Grotefend only adds from the name Eukratides, as it appears, a figure (𐨬) not appertaining to r. Mr. Prinsep gives another, which he has adopted from the Hermaios coins, before mentioned; a more accurate examination, and the comparison of the different copies, however, proves it to be but a form of r on a more extended scale. I have adopted the more angular form from the Azes coins, and also kept the sketchy approach to the cross-line below, viz. 𐨫, to distinguish it from d.

12. I can now take another more decisive step. The word for βασιλεὺς so often met with, which Mr. Prinsep read *malakáo*, and Mr. Grotefend *maharaó*, undoubtedly consists in accordance with so many copies, of the following letters, 𐨪𐨣𐨫𐨪𐨿. We are already acquainted with *maharaó*. The character 𐨣 which often has two oblique lines, as upon the Menandros coins, (As. Trans. v. Pl. XLVI. No. 6. No. 8.), but which in others, is defective in the lower cross-line, is read â by both my predecessors. Neither of them seem to have been aware, that if â be taken in this case as written after r, it also must occur wherever a long â follows a consonant; so that if the first half of the title be *maha*, the 𐨣

must be also placed after h, as the word is mahâ; the Semitic word *malakaó* is indeed a very doubtful interpretation, while, as the second letter is an h, not an l, and the third not a k, every shadow of identity with it disappears.

If then 𐨤 is not *á*, it must be a consonant, and this cannot be but g, (dj. ग) The word therefore is *mahara-g'ó*, viz. *Great king*. Against Mr. Prinsep's* first opinion, that 𐨤 did never occur as an initial, it has been proved by a later discovery†, that the native translation of the word *νικάτωρ* commences with a 𐨤, the two first symbols are 𐨐𐨤, and because 𐨐 is j, we must read *g'aja*, viz. victory, Sanscrit जय, and if there should remain any doubt, I beg to add, that *νικηφόρος* is also translated by the same native word, as upon the Archelaos coins (As. Jour. v. pl. xxxv. No. 1.)

Let us here only take up the new word, *Maharag'ó*. *Ra* as well as *ha* have in the Indian language a long vowel; but to denote this there is no symbol extant in the legend on the coins. Upon some copies, as above mentioned, we meet with a point below the *h*, as upon the Menandros coins (As. Jour. v. pl. xlvi. No. 6. and No. 8;) but *m* has there also such a point, and even the name Menandros at the last letter before *o*. In no case can it be taken for a. The point must have another meaning.

Hence it follows, that the inscription on the coins, does not distinguish between a long and short *a*, as I have already noticed, when observing on the letter *i*. This proposition is of highest consequence for the reading of indigenous appellatives.

I therefore read *mahârâg'ó*. If it be even granted, that this royal title might be introduced from contiguous India, and in consequence of this not sufficient to decide of itself the relationship of the language upon the coins, yet, it serves as an indication of the mode we are to follow in interpreting the other titles.

13. The last syllable in Hermaios is 𐨨𐨐 (As. Trans. Vol. iv. Pl. xxiv. No. 1;) upon No. 3, and No. 4, the ô occurs in an un-

* As. Trans. iv. 332.

† As. Trans. v. pl. xlvi. No. 1.

common form, which is perhaps only produced by the sharp accentuation. Thus ends likewise the name of Lysias; at the same place (As. Trans. Vol. IV. Pl. XXVI. No. 12. R. R. II. No. 8.) Mr. Prinsep inferred, that ^ was a j; Mr. Grotefend expresses it by i. But if we restore, according to Mr. Prinsep's striking remark, the upper line of the penultimate in the name of Diomedes, (As. Trans. Pl. XXXV. No. 3.) we shall have 𐨤𐨪𐨗𐨪, in consequence *dajamidô*, for no body would be inclined to read *daimidô*; and on the other hand, *daimidô* must be written 𐨤𐨪𐨫𐨪, ^ therefore is a consonant, and 𐨤𐨪𐨯𐨪 is to be read *hirmajó*. In the same manner 𐨤𐨪𐨭𐨫 must be accepted as *lisajó*.

Here I must however, remark, that we do not yet know whether 𐨪 be not rather written as the initial in Diomedes. Mr. Masson read 𐨤𐨪𐨫 at the end upon the coin of Archelaos, (As. Trans. Vol. IV. Pl. XXXV. No. 1.) but the name upon the coin has become illegible. According to the same analogy we must rather expect *Lisijó*, 𐨤𐨪𐨪𐨫; and here also we cannot come to conclusion, but by recommencing the investigation of the same coins, or by discovery of a new one.

From these corrected readings some peculiarities of the language become evident.

From *Hirmajó*, being substituted for Hermaios, it follows, that the language did not favour an open diphthong, as *ai*, and therefore changed the i into the affinative semi-vowel j. It probably did likewise reject *au*, and it would have been rendered in *av*, if a vowel followed this diphthong.

From *Lisajó* and *Dajamidô* or *Lisijó* and *Dijamidô*, it follows, that this language was averse to admit the use of *i*, followed by a vowel, even if a consonant preceded the i; I use the expression "is averse to" this admission; for if the three first syllables in Antialkides are expressed by *atia*, this is probably done only in obedience to the order of a foreign king. So much at least is evident, that the language rejected the hiatus in *Lysias* and *Diomedes*; in what manner it was supplied, must be left at present undecided. However, the most obvious conjecture is, that a j was evolved from i. Thus the Sanscrit in bhîê resolves the long î into ü whence *bhijé*; in *ijarti*, ij is derived from a

short *i (i-arti)*; likewise, *rijati* from *ri-ati*. The Prâcrit would admit the hiatus in *Lysias*, and *Diomedes*.

I shall yet add on the orthography of *hirmajó* the following remarks. We can find no affix to the r showing it to be r by itself, and not ra. There is indeed no sign of pause, no *virâma*, any more than is met with in the arrow-headed writing. We must then also here decide on purely philological grounds, whether a consonant, having no other vowel sign, is to be read with a or without it. The one peculiarity explains the other.*

Messrs. Prinsep and Grotefend read, according to the Greek, the symbol 𐏁 in Azes as z, and the symbol ∧ in Azilises as zi. Mr. Prinsep is inclined to admit also its denoting g' (ज्ञ);† but as we have found 𐏂 as expressive of this letter, we cannot agree in this supposition. On the other hand, it is more difficult to decide, whether ∧ be the representative of z (soft s).‡ I observe, however, that Azes and Azilises are not originally Greek names. The Greek orthography may therefore exhibit itself as expressive of permutative pronunciation, and the principal question would be, what sound both kings gave those names in their own tongue? Though this be here mere matter of conjecture, yet, I think, I could maintain this one point, viz. that the language, as related to the Sanscrit and Prâcrit, had not the sibilant sound z of the Zend and old Persian languages, nor the French and Portuguese j, nor the Persian ژ; it must therefore denote such a sound by another letter. A French j, very softly pronounced, many indeed sound to the ear as a y, on the other hand, z as well as the French j, proceed from y. If then those Indo-Scythian names sounded as Azes and Azilises, the Greek representation of them would be, on the one hand, a most proper one, and on the other, that upon the coins, would serve as helping to give a proximate idea (of the sounds.)

That ∧ denotes j, is too much confirmed by the above mentioned Greek names, to be given up; and to adopt two different

* In this somewhat obscure passage I understand Prof. Lassen to mean, that the absence of the *virâma* in the arrow-headed characters explains the similar peculiarity observable here.—Trans.

† As. T. iv. 330.

‡ Diez Romanische Grammatik 1. 220.

sounds for the same symbol, is foreign to the character of those languages, which write in accordance with pronunciation, and which are hardly acquainted with *historical orthography*, as the French and English have now got it, (or the mode of writing words arbitrarily, and not as pronounced.)

14. I will now observe succinctly on the s in the name of Lysjias. In As. Trans. Vol. IV. Pl. XXVI. No. 12, we find χ for s; the y which follows it, which Mr. Prinsep believed to be a t, is indistinct, so also upon the copy, R. R. II. 8: both representations by Mr. Masson (As. Trans. Vol. III. Pl. IX. No. 15 No. 6.) furnish only a scrawl, at which however, nobody will much hesitate; with R. R. I. is distinctly the character ▽, there is here indeed no trace of an i, and we had to read *Lisajô*. Mr. Grotefend renders the y, by reading Lisiô, i. But I have already previously stated, that we must here expect an i, and we may indeed take the character in the As. Trans. so, as still to preserve the trace of that letter. For by comparing si in the name of Philoxenos, it appears, that in ▽ the i crosses the triangle; upon the coins, (As. Trans. Vol. IV. Pl. XXI. No. 1 and 2, a χ viz. si) twice before nô, the difference being, that in course of time the triangular character has taken an open form. R. R. II. No 5, is well preserved, and has ▽. I therefore adopt also ▽ as the perfect character upon the coin of Lysias.

I must prove hereafter, that ▽ is probably a sh (sch. 𐎱.)

We now proceed to apply the fourteen letters, thus defined, to the attributive epithets, met with on the legends. From this examination we shall derive some new letters, with which the names of the kings could not furnish us, and we may perhaps succeed by this in obtaining a more exact insight into the character of the language. But let us first sum up the results of the previous inquiry.

The fourteen characters, above discussed, appear to me to be sufficiently confirmed (to aid us) in further decyphering. Twelve among them are consonants, which, however, do not enable us yet to define the system of consonants in the language. We therefore resort to the vowels. We have discovered the two simple vowels a and ee: the first, when initial in a syllable, is expressed by an independent symbol, placed in

the line itself; when following a consonant, it is not expressed by an independent sign, but included in the consonant. There is no peculiar sign for the *long a*. The independent figure of e is not yet known to us; preceded by a consonant, it is denoted by a mark on the consonant, and it has likewise no peculiar sign, when long. It serves to express the Greek vowels ε, η, ι, υ, while a is substituted for α and ο. We are also acquainted with an ô, the long sound of the Sanscrit, compounded of a and u, which, however, when it concludes a word, loses so much of its value as to correspond with even an omicron. It is always expressed by an independent symbol in the line. We have supposed by anticipation, eë to be of a similar nature with o; but that ai and au exist uncontracted, is to be doubted.

With regard to the language, as we know as yet too little of it, it will be best to put together our results at the end of the next paragraph. But for the system of vowels I think it most convenient to insert here a short disquisition.

ε, ο, υ, not existing in the language, and the simple vowels being restricted to a and e, it may be inferred, that the language upon the coins, as regards the system of its vowels, continued to exist (from of old) in the same undisturbed and simple state. Of simple vowels, we have to expect only an oo, and it seems even probable, that, when preceded by consonants, it was written in a similar way as e.

Mr Grotefend, by reading *Ukratidô*, imagined that he had discovered the initial oo in the name Eukratides; we may subsequently dispute this view. To find the u, preceded by a consonant, we must here discuss the name, Philoxenos.

In this name the second syllable is not 𐨤, as it represents λο in Apollodotes; but in As. Trans. vol. IV. pl. XXI. No. 1. and No. 2. there occurs on both occasions one and the same symbol between *shinô* and the beginning of the word which has a 𐨨. It is but half preserved upon No. 1.; upon No. 2., however, where we do not find any appearance of decay, a 𐨨 occurs; thus we may fairly suppose, that 𐨤 belongs at this place only to l, and 𐨥 may be the symbol for u. R. R. II. No. 5 also is unfortunately much spoiled; yet, it is evident, that there was only one symbol between *shinô* and the beginning of the word, which can only be a well

preserved 𐏐; on the other hand, in No. 6. between *shinó*, and the beginning of the word, we observe the following, 𐏐𐏐, so that we should be inclined to suppose H to be substituted for 𐏐, viz. for λο, and 𐏐 to be K. This Mr. Grotefend has adopted. But as I shall assign to K an entirely different figure, which cannot have occurred before 𐏒, either upon this coin, or upon the others of Philoxenos, I must maintain, that the native orthography had no K at all in the name. But supposing, the line 𐏐 belonged to the preceding H, and that there must have been a 𐏐 there, which in this form cannot be H, I can only admit, that the cross line was half corroded, while both final lines were too much protracted; in a word, that we must recognize here, Mr. Prinsep's figure, 𐏑.

The assertion, that the second symbol in the name of Philoxenos,* which I restore thus, 𐏓𐏒𐏑𐏐 is *lu*, is at variance, however, with the more common mode of representing the omicron by an inherent A. We think this objection so important, that we shall adopt 𐏑 for *lu* at first only in the way of conjecture. It is countenanced only by the name Agathokles, written in the old Sanscrit character, which is rendered *Agathukla*, and consequently the authority exists in at most only a contiguous language. With more confidence we maintain, that the natives did not retain the k in the name of Philoxenos, and in that case an absorption of k with the sibilant must have taken place. There is, however, no analogy with this absorption in the Prâcrit; here x (क्ष) is altered into kkh κχ); the language of the coins does not always follow the rules of absorption in Prâcrit, this is proved by *hirmajó;* it does not abound, as the Prâcrit, with reduplicated consonants; this is proved by Apollodotos, which is expressed *Apaladató*. We must therefore look out for other analogies, and here the Zend supplies us with the very striking fact, that it often substitutes sh for क्ष (ksh) of the Sanscrit. Thus *dashina* (the right) for *daksina, ashi* (eye) for *akshi*. I therefore conclude 𐏒 to be sh (sch).

But why should this sh occur in Lysias, which has but the

* Mr. James Prinsep's last reading of this peculiar name from the Bactrian legend was as follows, 𐏓𐏂𐏓𐏐𐏐 *Phila-senasa* or *Philasinasa*. See page 652, vol. vii. July, 1838. It is this name and that of Lysias that proved the 𐏓 to be an 𐏂.—H. T. P.

s in Greek? I shall be perhaps reminded, in answer, of the Sanscrit rule which might have been originally observed in the Zend, according to which s, preceded by any other vowel than a, is to be changed into sh. This interpretation, however, is not supported, because we shall hereafter find it probable, that not only z, but s also, are placed after i. I therefore can only wait for further discoveries.

§ 3.

Titles of honour of the Kings.

We are already acquainted with the translation of the word king, by *Mahârâgô*, great King, and we will now resume the thread of the discussion.

The beautifully preserved Azes-coins, with the most distinct characters,* express the Greek title ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ in native characters

𐨨𐨪𐨟𐨁𐨪𐨟𐨁𐨪𐨟𐨁𐨪𐨟𐨁

Mr. Grotefend thinks, he is entitled to read in the foregoing legend *maharáó nanáó maharáó Azo,* according to PAO NANO PAO upon the Kanerkes-coins, and he was in consequence compelled to admit some spurious forms of n, resembling the shape of r and t; his alphabet exhibits five of them. Mr. Prinsep supposed them to be repetitions of the word *Malakáó.* Both of them, I think, will admit the refutation on previous grounds. By the term *Mahárágó* the simple title, βασιλεὺς, is always expressed, and it is remarkable enough, that the simple word *rágan* never occurs for it. The Greeks were satisfied with the plain title βασιλεὺς; this term Menandros and the Greek Kings ordinarily make use of: Eukratides alone affects the prouder title ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ, for which *Mahárágó* appears to be the adequate translation. It certainly may be so according to original meaning, but scarcely according to the real interpretation of the word; for *Mahárágó* was already so much worn out by use, that it was of no more value than the simple king. Many an insignificant chieftain thus styles himself in Indian inscriptions; and the degradation of the term has so increased, that many private men at present claim this title, as for instance Rammohun Roy, who was so called, and a *Mahárága* is as common in India, as a *principe** in Italy. Eukratides (whether *the second,* or not, shall here be left undiscussed) was certainly aware of the difference in the acceptation of those words, if he have also titled himself, according to the drawing of Masson (and not according to the represented coins†) upon some specimens טלרצף רשרצף, "the great king, the king of kings." As then *Mahárágó* was of less value, than it was as originally compounded, the explicit addition of the term "*great*" to Azes after the words, "*King of Kings*" is less tautological, than it appears at the first glance.

The compound word *rágárágó* corresponds to βασιλέως βασιλέων. These words *(máhárágô rágárágô)* may both be Sans-

* As. Trans. iv. p. 338.

† If the definition of an Italian *principe,* "something less than an English Esquire," is correct, Mr. Lassen is certainly out in his estimate of the common usage, to which *maharaja* is put. It is only in Bengal and Behar, that the title may be termed degraded to the use of private men.

crit as well as Prâcrit; for as used here, the Sanscrit would change the nominative as into ô. The variety *rágádhirâgó* contains a remarkable mistake in orthography, the word *adhirâga* "Supreme King,* often met with in the titles of Indian Kings, has dh, not d. Whether the stamp-cutters in Azes' time, perhaps not often natives, did not pay much attention to the proprieties of indigenous grammar, or whether the language itself confounded both sounds, d and dh, I shall not pretend to decide; there will hereafter indeed occur some other examples of the same substitution.

Maható (great) compels us to declare the language of the coins a variety of Prâcrit. The Sanscrit nominative is *mahan*, the Prâcrit nominative *mahantó*; the terminal ô at this place proves also, that the alteration of as into ô occurred in all instances, as in Prâcrit. The writing *maható*, by exhibiting the same omission of n, as occurred in *Atimakho* for Antimachos, proves, that it is not the pure Indian Prâcrit, but a dialect, approaching also to the old Persian; for when the arrow-headed inscriptions render *gadârâ*, hidhush† for gandârâ, hindush, there is the same exsection of n, when followed by dentals, or properly an absorption, when n is rendered like the succeeding letter; thus the Byzantines said *Kaddakootzen*, instead of *Kantakootzen*. The language of the coins, however, like the Zend, has no reduplicated consonants, consequently not *mahattó*.

The constant epithet ἀνίκητος, is very distinct upon the Philoxenos coin (As. Trans. Vol. IV. Pl. XXI. No. I.) 𐨪𐨫𐨿𐨪𐨿𐨪‡ *Apalihatô*. *Apratihata* signifies in Sanscrit *non repulsus*; the preposition *prati* often becomes in Prâcrit *pali*.§ We have consequently got another Prâcrit form of quite unexceptionable interpretation. Νικηφόρος and νικάτωρ are expressed by the same word. See the coins of Amyntas (As. Trans. Vol. v.

* Atirâg'a, being not in use for this title, I shall leave it undiscussed if there it must not be read 𐨟𐨁 ti.

† According to Mr. Beer's correction; I have much pleasure in availing myself of this opportunity to thank him publicly for his solid and instructive, as well as kind, critique of my work on arrow-headed writing.

‡ Mr. James Prinsep reads this epithet *Apavihatasa* 𐨪𐨯, and this 𐨪𐨯𐨟𐨪𐨿𐨪 *Jayadkarasa*.

§ My Grammar, IV. 5. 0.

Pl. XLVI. No. 1) and those of Archelios, at the same place (Pl. XXXV. No. 1). Farther evidence is superfluous. It is represented in the native language by 𐨗𐨪𐨁𐨗𐨯. The letter, yet unknown, can be only v, and the word *gájavató* (the victorious,) according to the same form as *maható* for the Prâcrit *gajavantó*, Sanscrit *gajavan*, in the accusative, *gajavantam*.

We have therefore acquired v, 𐨗. (as our 15th letter.)

The word, substituted for δίκαιος, commences with a symbol yet unknown (As. Trans. IV. Pl. XXI. No. 9. v. pl. XXXV. No. 6. No. 1.†) The second syllable is every where 𐨩, mi; after it follows a yet undefined letter, and then ô.

The first has the form 𐨁 or 𐨂 upon the two coins, first mentioned; upon the last coin the same sign, but reversed, so as almost to resemble 𐨗; and it is probably only incorrectly drawn, though Mr. Prinsep from the Archelios coin and from one coin of Azes, who likewise assumed this title (As. Trans. IV. Pl. XXIII. No. 22. v. p. 549.) has chosen this figure for the print.‡ It will be safer at all events to take the other.

As I think, I have proved, that we have to look for Indian words upon the coins, it evidently follows from the second syllable that 𐨟𐨣𐨩𐨁 must be read, *dhamiko* (the just); in Prâcrit *dhammikó* or *dhamikó*, in Sanscrit *dharmikas*. The â is here again unwritten, and the consonant is not reduplicated according to the already stated peculiarity of the language of the coin; the union in one character of r m accords quite with the rule of Prâcrit, while the retention of the r in *Hirmajó*, is certainly to be accounted for (as before noted) by the authority of the king Hermaios, who would not allow his name to be corrupted. What I have further to prove, are the two new letters; on k, I shall speak hereafter; I will *now* discuss our 16th letter 𐨁 or 𐨂, dh.

It appeared already from former remarks, that the second n is not met with in the name Menandros. Now we know that the native language did not admit an n, followed by

† R. R. II. No. 9. is indistinct.

‡ The Azes-coin, however, according to the representation, is not well preserved, or not precisely copied by Mr. Masson, for the last letter also is wrong: 𐨑 for 𐨟.

dentals. Mr. Prinsep read *Minandô*, as the penultimate symbol is indeed very similar to the n, already discussed. It is thus upon the coin (As. Trans. v. Pl. XLVI. No. 6,) where no error appears to have occurred 𐨟𐨪𐨢𐨿𐨯, and I should not hesitate to read *Minandô*, were it not evident, that by the law of the language the n cannot be retained in Menandros, and were not the omission of dr at variance with the rules of the absorption of consonants.

Mr. Grotefend's supposition, as it appears from his Hebrew paraphrase [דרע] מנג is deficient, in that the termination ô, which he improperly puts also between brackets, occurs often enough to prove, that nothing is omitted before it. I do not therefore know, how he can read Menandrô; for the coins he used, have no more symbols than the others.

It is only fair, however, to add, that the letters of the coins (R. R. I. No. 8, 9, 11) have become so indistinct, that, with regard to the name, nothing can be decided from them. No. 10 renders, in apparently well preserved characters, 𐨟𐨪𐨪𐨟, which we might read *Mitarô* or *Mitadô*, but the 𐨟 upon the coin is certainly spoiled. Not to judge too arbitrarily, I shall leave it to a renewed investigation, if there occur two orthographies of that name.

By comparing the remaining copies we observe, R. R. II. No. 12. has still the n, though mutilated, then ·𐨪, and lastly 𐨟. Even upon Tod's coin, No. 2, quoted by Mr. Grotefend, the terminal letters are also obviously 𐨟𐨪; the preceding letter is entirely misdrawn. As. Trans. Pl. XXVI. No. 2. distinctly renders 𐨢 in the form, above established, and the final letters are again 𐨟𐨪. Consequently 𐨟𐨪𐨢𐨯; No. 3 is no less distinct; the ·𐨪 has an additional point, as at R. R. II. No. 12, As. Trans. v. pl. XLVI. No. 8 has 𐨟·𐨪𐨪𐨯, with two points. At the same place, No. 1 gives ·𐨪 with the point, but afterwards an n of the same form, but without the point. Thus also v. pl. XLVI. No. 6. 𐨟𐨪𐨪𐨯.* Finally at the same place No. 9 and No. 5 have for these two 𐨪, two 𐨢 viz. 𐨟𐨢𐨯, save only, that No. 5 is more indistinct and corroded.

*Mr. James Prinsep has two readings for the Bactrian legend of Menander-coins, viz. 𐨟𐨪𐨪𐨯 Menanasa and 𐨟𐨪𐨢𐨯 Melanasa.—H. T. P.

Here we therefore indeed observe an inconsistency in the characters, which depends not simply upon the state of the coins, while from the addition of variously situated points with both letters, we may presume, that the indistinctness was to be amended by additional diacritical symbols. This idea as to the points, cannot be established but by carefully examining the coins themselves. The point at 𐨗 serves perhaps to distinguish it from 𐨙, r.

Be it as it may, it is evident from our review, that some coins obviously distinguish the second symbol from the third. As now 𐨤 by the omission of the cross line below, and by a greater curvature in the middle, may easily be altered in the figure 𐨣, nothing prevents us from supposing, that the second syllable may still be 𐨤 or *na*.

The penultimate symbol, being proved so incontrovertibly as n, 𐨣, I do not hesitate to declare it the above adopted dh 𐨣. In the word *dhâmikô* we observed also instances, showing that 𐨣 has a straight form 𐨥, and this approaches so much to n, that we can hence likewise account for the confounding of both.

For r we never meet with a peculiar symbol, and the name must therefore be read Minadô. The adoption of 𐨣 as dh, will lastly be confirmed by the fact, that in the same word it is commonly written 𐨙, and seldom 𐨣. The 𐨙 upon the coin, R. R. I. No. 10, appears to be indeed confounded in the reversed way, viz. 𐨙 for 𐨣. But 𐨣 if it be a dental sound, *dhâmikô* decides for the adoption of *dh*.

In *Minadhô* r is absorbed, according to rules of Prâcrit, for instance, *kandras* becomes *kando*. As 𐨣 for d appears to be the rule in Menandros, we cannot consider 𐨣 to be substituted by mere chance for 𐨙; but it must be founded upon the nature of the language. We may here recall to mind the rule of the Zend, according to which the Sanscrit *putra* is changed into *puthra*. The omission of the r may have had an effect, similar with the Persian sur, (si, or three) which presupposes a previous form *thi*, the *th* of which still remained, after r had disappeared out of the more ancient form *thri* in Zend for the Sanscrit *tri*.

We have in *Minadhô* for Menandros an evident instance,

that the language of the coins followed its own principles, in the paraphrase of Greek names. I would notice at the same time, that we may expect a similar kind of absorption in Eukratides, and we can already hypothetically maintain, that r, preceded by consonants, was absorbed.

R before consonants is likewise absorbed, as in *dhâmikô*, and we undoubtedly have properly attributed to foreign authority the deviation from the rule in *Hirmajô*. If the name Archelios were precisely represented in the native writing, it would supply us another opportunity for testing the rule for r. The name of this king is certainly written thus, and not *Archelaos*, if the Greek be properly represented, and the native legend, according to the only copy, As. Trans. v. pl. xxxv. No. 1, be properly rendered by Mr. Masson. The Greek legend is distinct: ΒΑΣΙΛΕΩΣ [ΔΙΚΑ]ΙΟΥ ΝΙΚΗΦΟΡΟΥ ΑΡΧΕΛΙΟΥ; the native legend is similar, save the name, which is in the copy entirely illegible. Mr. Prinsep, however, renders this also, according to Mr. Masson's drawing. I copy the whole: טורצף לשמ[ך צאלנ]ך ירוא.

Leaving the name for the present, we may assert, on the authority of the other examples, that the initial of the second word is incorrectly given, it must be ε. The legend will consequently be *Mahârâgô dhamikô gajavatô*, the supreme King, the just, the victorious.

In the name itself ך is evidently an error for ל, li, as *Lishijô* for Lysias; for rche there consequently was only one symbol. If Mr. Masson has correctly copied, it is there *Ahalijô*. But as ε (epsilon) must be expressed by e, it follows, that the second letter has not been completely preserved, and I do not doubt, that it was א, chi, khi. But there is no trace whatever of r, and we have again an absorption of r before other consonants. If Archelios was termed in the native language *Akilijô*, his pride was perhaps gratified, as being reminded of the name of the great Pelide, so that he would not much object to the rule.

The most difficult title, that namely, by which σωτὴρ is

* V. 549.

translated, is still left to be discussed. It too terminates in ô; but there precede three symbols, which belong all to t, d, r, letters so easily to be confounded, though Mr. Prinsep,* who, however, observes the ambiguity, has taken it for k. Among all the readings, *rakakô*, *radakô radadô*, which can be taken on his conjecture, he chooses *rakakô*, because the Sanscrit word *rakshaka* denotes *protector*, and because (he does indeed not expressly mention this, but it must have influenced his decision) *its form* in Prâcrit is *rakkhakô*. Though I could mention several other objections to this interpretation, suffice it to say, that there is no k to be met with in the word. For the same reason we cannot adopt the word *târaka*, supporter, deliverer.

Mr. Grotefend started on the supposition, that it was the same with KOPANO, which occurs upon the Kanerkes-coins. Besides, however, that this word may have belonged to a dialect, different from what we have hitherto discussed, the same objection will also be decisive; neither the n, here assumed, nor the k can stand the test.

After having compared all instances of this word upon the coins of Menandros, Apollodotos, Diomedes, Hermaios, it remains doubtful yet, as for what we can take the three first characters of the word; we may read 𐨟𐨪𐨟 just so, according to the coin which we choose as a criterion for those three letters.

A hint appears in the following. We observe different orthography of this word upon coins, which certainly belong to a later period, and the words on which seem to intimate an altered state of the language, as upon the coins As. Trans. Vol. IV. Pl. XXIII. No. 23, where the Greek legend exhibits ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ ΣΩΤΗΡ ΜΕΓΑΣ, so also upon the coins of the unknown king, who usually has only Greek inscriptions;† fortunately we can easily read a portion of the native legend, it is thus: 𐨟𐨪𐨟 𐨪𐨟𐨯 𐨟𐨪𐨟, therefore, *mahâ —adharô mahârâgô*; to this there probably succeeded *râgarâgô*; but this part is no longer legible. 𐨯 is the second character in

* IV. 335.

† The king too is on horseback, as upon the purely Greek coins of the great deliverer; this accords with the monogram. See at the same place No. 26. The reverse is different.

the word we are in search of; it will therefore be in the usual form a 𐨤 or d. Now the word is thus written upon the Yndopherres-coins 𐨤𐨪𐨤𐨤, dh standing here too for the first letter.

Before recognising these representatives of the first two signs* of 𐨤𐨪𐨤𐨟, I had asked myself, by what word σωτὴρ would be expressed in Sanscrit? The question was easily answered; it could only be *trâtri*, nominative *trâtâ*, accusative *trâtâram*; the nominative in Prâcrit is *tâddrô* for this;† thus 𐨤𐨪𐨤𐨟 was without difficulty to be read. The reading, discovered afterwards, 𐨤𐨪𐨤𐨟 confirmed this interpretation. For want of a more exact knowledge, 𐨤, dh, was substituted for d. 𐨤 in the first syllable shows a state of pronunciation, still more corrupted, but otherwise it is an acceptable confirmation, by establishing the dental sound of the beginning.

In the Prâcrit of the dramas, the initial t usually retains its class (as a letter) while the t, included by other letters, is generally subdued (as a sound) to d, I find in 𐨤𐨪𐨤𐨟 this transition of t to d; without asserting, however, that this form of the d had been adopted upon the older coins. He that still adheres to the reading of *tâtârô*, can only be opposed by reasons, not to be derived from the characters. The form 𐨤𐨪𐨤𐨤 which reduces the initial also to dh, refers to a still later period of the language.

I think, I have sufficiently explained the usual epithets and titles, and I may now be allowed to survey the principal results.

The language has apparently manifested a strong bent to the Prâcrit of the dramas, by its absorptions and by forming new, short forms of A from the long ones; the nominatives in ô, as belonging also to Zend, prove nothing (as regards Prâcrit affinity) words as *râgan* and *dharmo* are so undoubtedly Indian, and not Zendic, that the relation of the language to India is quite evident from them; also *gaja* for victory, and *tâddrô* for deliverer (though I shall not deny, that the latter belongs to the Zend) are entirely Indian roots.

* Mr. James Prinsep's last reading of this word was 𐨤𐨪𐨤𐨤 *Nandatasa*.—H. T. P.

† My Grammar, p. 291.

But we should be wrong in not confessing, that some traces refered to a dialect, not merely Indian, as, for instance, the omission of n before t and d, and the want of reduplicated consonants, even when they were required for the foreign word, as Apollodotos. The latter fact does not accord with the Prâcrit, where nothing is more frequent than ll, mm, and others. The former, though not Zendic, is old Persian, and the language of the coins seems to occupy a place midway between the old Persian and the Indian languages.

It is now incumbent on me to vindicate the opinion I have adopted regarding k, in opposition to both my predecessors, in effecting which I shall discuss the names of Greek Kings, not yet examined, which will prove instrumental in fixing the alphabet.

§ 4.

Inquiry into the Alphabet from the names of Greek Kings. Continued.

Mr. Prinsep as well as Mr. Grotefend, obtain their k principally from the name Eukratides; the latter represents it in the form 𐨒; according to the former, it does not differ from d and r. The name Eukratides induces the following dilemma,—whether we suppose the dipthong ε υ to be expressed by one or two letters, both succeeding letters are displaced. No one has supposed the case, that r was perhaps omitted, though it is evident, that according as it is expressed or not expressed, k must occupy another place. Mr. Grotefend read *Ukratidó*, Mr. Prinsep *Eukratidó*.

To arrive at the real k, we shall pursue a different course.

The k I adopted in *dhâmikó*, is exactly 𐨓 upon the coin of Archelios; upon another at the same place, v. Pl. xxxv. No. 6, 𐨒 is substituted for it, so that the right half of the letter does not occur; upon the copy iv. Pl. xxi. No. 9, the symbol is destroyed, also in R. R. II. No. 9. But that 𐨓 is the real, complete figure, follows from a remark of Mr. Prinsep* who notices, that upon a coin of Azes (iv. Pl. xxiii. No. 22,) 𐨓 distinctly is the penultimate symbol of the word, denoting *just*.

* V. p. 549.

O is preceded by 𐨪 in this word, by which we are prevented from adopting 𐨪 as loo, if 𐨫 be indeed previously correctly fixed as *loo*. If there remain any doubt, the word Antialkides would set it at rest.

That this was the name of this king, and not Antilakides, is confirmed by the native legend, which is 𐨀𐨑𐨪𐨐𐨫𐨐𐨿, *Atialikadó*, according to Mr. Prinsep's* examination of a well preserved copy.

This k is throughout well preserved upon the coins, As. Trans. Vol. IV. Pl. XXIV. No. 9, 10, 11. also R. R. I. No. 15; it has, however, been obliterated on R. R. II. No. 7.

Here let me remark on the name Antialkides; *lk* is a compound, which is not admitted in Prâcrit; in that language it becomes kk by absorption. Here both consonants remain, but only in this way, viz. by separating l from k, by transferring the vowel i (l k i) to the first consonant, and by adding a to the second, in consequence *lika* for *lki*.

We observe a similar method in Prâcrit,† according to the prevailing rule of which similar consonants only, when coming together, are admitted. If therefore two dissimilar consonants meet together, of which neither will give way to the other, an intervening vowel is added to the first, and by this separation of the obstinate couple, peace is restored between them. In Prâcrit this is the case with kl; *kilésa* from *klêza*, *kilanta* from *klanta*. Our Prâcrit treats lk accordingly; the difference, however, is, that though the vowel of the first consonant is borrowed as in Prâcrit (i-i, i-ê, *kiléza* from *klêza*, *sirî* from *sri*,) from the original syllable, yet, this syllable does not retain its first vowel. The Prâcrit would require *Antialikidó*.

The opinion therefore, that the language of our coins transformed foreign names, according to its genuine rules, is here also confirmed.

I think then, I have arrived at the real k, and instead of borrowing it from Eukratides, I shall only exemplify it there.

I might be satisfied with Mr. Prinsep's statement, that all

* V. p. 722.

† My Grammar, p. 182.

the drawings of Mr. Masson represent this wise the name יבהלידק. But as the k in this very name Eukratides, was entirely misunderstood formerly, I may be allowed to proceed a little more cautiously. I shall therefore place the different characters, yet preserved, of four edited coins, one under the other As. J. Vol. IV Pl. XXV. No. 8 has זלנדודר

	,,	,,	,,	9 ,,	נחאוק
	,,	,,	,,	10 ,,	?וקקוק
R. R. I.	,,	,,	,,	7 ,,	זודדורק.

The last half consequently is *tidó*, three characters only precede it. The third among them is decidedly not r. Two legends exhibit the k, already known to us, one gives the *k* (ה for ח,) and a fourth decides nothing, as the legend is evidently spoiled. R is therefore omitted, as in *Minadó* for Menandros.

If therefore*—*katidó* is to be read, Mr. Prinsep is quite right in stating, that two symbols precede k, but I do not know in this case, how he obtains his r. Mr. Grotefend proceeded carefully by adopting one character only for ευ in order to get k r. He must therefore take k for r, the ב for k, and ץ for a simple vowel, while the initial letter, according to him, represents u. Thus is it in his alphabet, but I hope, I have convinced him of his mistake.

In interpreting the two first characters, I shall not begin by inquiring, in what manner the diphthong ευ, foreign to those languages, might have been expressed; as to its being foreign, I think, it is already inferentially proved in the previous remarks. As υ is rendered by i, I shall adopt ז or ר as i, viz. as the sign of this vowel, when commencing a syllable. Though this is not here the case, yet there was no other expedient in the system of

* Mr. James Prinsep's last reading of this name was as follows :—
Eukratidasa יבקלידק viz.

ץ e
ב u
ק kr
ל ti
ד d
ק s

Eukratidasa, See Journal for July, 1838.—H. T. P.

the native language, unless the writing *Ejakatidô* were chosen; but it was more natural to write *eïkatidô*. By this paraphrase I acknowledge, that with Mr. Prinsep, I take 𐨐 for ê, viz. for a long ê, which was not confined to denoting the never shortened vowel of the Sanscrit, but which also expressed the lighter one of the Prâcrit, and which, as the analogous ô, 𐨏, probably had its constant place in the same line with the consonants. The reason, that e in *êïkatidô* is not, as usual, expressed by i, appears even to have proceeded from the impossibility of approaching the foreign sound in any other way, than in that, above mentioned.

With regard to the last two of our three new letters, we shall call to mind, that they still have to be confirmed (17,) 𐨑, k (18); 𐨔, i; (19,) 𐨐, ê.

Again k seems to occur in a name, hitherto obscure, and which even now cannot be entirely illustrated.

The Agathokleia-coin offers the unexpected and pleasing fact of a Greek queen in that remote quarter of the East;* upon its one side we observe a helmeted head, whether of a woman we shall leave undecided, with the legend; ΒΑΣΙΛΙΣΣΑΣ ΘΕΟΠΡΟΠΟ(Υ)ΑΓΑΘΟΚΛΕΙΑΣ. If we now look upon the reverse for an interpretation of the unusual and obscure epithet of the queen, we find the representation of a sitting Hercules, who appears with the left hand to hold the lion's skin, and with the right perhaps leans on a rock, as upon the coins of Euthydemos, where, however, he holds with the left the club. While in expectation of the translation of the Greek legend, we are surprized at the word;† 𐨨𐨪𐨪(𐨯) *makârâgô*. We know the language sufficiently to assert, that it, like the Prâcrit, has not used the masculine termination for a queen. There is therefore the title of a king. Then follows 𐨟𐨪𐨟(𐨪) *tâdârô*, deliverer. Two testimonial instances prove, that

* As. Trans. V. Pl. XLVI. No. 2.

† *Maharajasa* according to Mr. James Prinsep, who particularly remarks, that the masculine word is used. The word after *Maharaja* he suggests may preferably be read *Devamatasa*, which is an exact translation of ΘΕΟΤΡΟΠΟΥ.—H. T. P.

the Greek titles are not repeated on the reverse, and we therefore cannot derive any advantage from discussing them here.

After *mahârâgô tâdârô* we expect the name of a king, which must be contained in the symbols 𐨪𐨫𐨨𐨪𐨁𐨪.*

The writing does not compel us to divide the word in two, as Mr. Prinsep proposed, because 𐨪 is placed in the middle.

The second letter, if properly drawn, can only be k, and there is no room for doubt on this point, as the coin itself was in the hands of Mr. Prinsep. The fourth character, though most closely approaching the form of dh, may likewise be taken for an n; it is accompanied by ee. Mr. Prinsep indeed substitutes for this the figure 𐨯 in his print, but on the coin it is such as I represent it.

The† initials being therefore *Mikô*, may correspond with the Greek Μικω, Μεκω, Μηκω, Μυκω. It appears probable, that the next letter of a Greek word is rather n than dh, which would be only substituted for d. We lastly meet with 𐨪 and the unlucky letter 𐨫, which may be taken for t, d, or r, and affords a beautiful opportunity for a guess.

Since Μεκ is not the beginning of any Greek word, and no king is likely styled Μηκωνίτις, the initial letters must certainly be Μικω or Μυκω; we cannot say much in favour of Μικ, even if we would look for an absorbed r in the native character, viz. Μικρω.

We therefore come to Μυκω, and here Μυκώνιος, from the island Mycone, appears of itself; Μυκωνίδης is indeed not a Greek name, otherwise known, though it would be least objectionable to read in this way the native characters. If 𐨫 were allowed instead of 𐨨, we should obtain *Myronides*, who would be admitted with much less opposition as a king, not yet known at the Indus. But not indulging such a supposition, merely arbitrary, we do best to wait for further discoveries.

* Mr. James Prinsep reads 𐨯𐨪𐨫𐨪𐨁𐨪 the name here referred to Fakasaqlitasa.—H. T. P.

† Mr. James Prinsep's discovery of the letter 𐨪, as equivalent to the Greek φ, resolves the difficulty, felt by Mr. Lassen, at finding, what he read as ψ *me* at the beginning of the name of Agathocleia. In this word it is apparently the equivalent of the Greek digamma.—H. T. P.

As the native name does not recall elements of Persian or Indian words, we shall by no means attempt to obtrude a barbarian husband on the noble Agathokleia.

§ 5.

Continuation—regarding the names of Kings, not Greeks.

I now pass to the coins of Kings, not Greeks, to complete the native alphabet, and to advance our knowledge of the language from their legends.

Azilises presents a new symbol. As. T. IV. pl. XXIII. No. 27. No. 28. R. R. II. No. 20. 𐤑, almost like an ê; the Greek denotes the same by an s. We have already another s, 𐤔, which we take for sh, and will discover a third 𐤎. We must therefore choose z or s for either of them. Besides, it is possible, that s in Azilises is substituted in the Greek translation for a k' (tsch) 𐤒, as this sound was not original in the Greek, and was adopted as τζ at a later period only. It is therefore a mere arbitrary reading, when I take conjecturally for our 20th letter 𐤑, as z.

The Parthian king Vonones, has the Greek legend, ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΟΝΟΝΟΥ.* This follows from the coins R. R. II. No. 10, No. 11, I. No. 20, where, according to the native legend, however, not ΜΕΓΑΛΟΥ, but ΔΙΚΑΙΟΥ must have been written; for we observe upon the reverse still 𐤃𐤊𐤀𐤉𐤅᎓, as also in As. J. IV. pl. XXI. No. 5. Though we do not know yet any copy, exhibiting the entire title, we can confidently construe it by comparison. The reverses also give us nothing but fragments of the native legends; we must, however, have recourse to them to obtain the name. R. R. II. No. 10 has 𐤋 over the right arm of Jupiter, and the letter, next following, seems to be a disfigured 𐤃; it then would be *gô* the end of *Mahâtâgô*; for the succeeding illegible word has five characters, and is therefore 𐤓𐤁𐤕𐤀𐤃 *râyâtâgô*. It would be indeed singular, had *great* preceded the other titles. But it appears

* The Arsakides-coins also combine both titles, as those that are attributed to the twelfth (of those kings) or Phraates III, Eckhel III, 528. ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΑΡΣΑΚΟΥ ΜΕΓΑΛΟΥ ΔΙΚΑΙΟΥ ΘΕΟΥ ΕΥΠΑΤΟΡΟΣ ΦΙΛΕΛΛΗΝΟΣ.

difficult to decide any thing by the instrumentality of specimens, so defective. The specimen R. R. II. No. 11, commences regularly with *mahârâgô râgârâgô ma(hato)*. The name does not occur on either side R. R. I. No. 20, when *mâhârâgô* is scarcely to be distinguished, but evidently has over the head of Minerva 𐨨𐨪𐨿𐨨 (ε,) *dhâmikô*; then follows the name,* As. T. IV. pl. xxi No. 5 has 𐨨(𐨪𐨫)∪(𐨨)𐨬, probably *(mahârâgô ragârâ)gô*

* The same also upon a coin of Mr. Masson, As. T. III. pl. xi. No. 43,

1 𐨨𐨪𐨫𐨬 𐨲

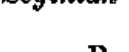
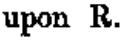
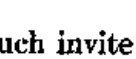
2 𐨨𐨬∪𐨫𐨪 𐨲

3 𐨨𐨬𐨫𐨪𐨪𐨯 𐨲

are read by Mr. James Prinsep, *Spalaha'rasa*, *Spalafarmasa* and *Spalirishasa*, and with reference to this part of Mr. Lassen's treatise, it may be as well to give from a letter of Mr. Lassen's to that gentleman, dated 30th December 1838, and which reached India after Mr. James Prinsep had left, never to return, the following extract, showing the opinion of Mr. Lassen, after reading the article referred to—"You will soon receive a little treatise of mine in which I have endeavoured to show amongst other things, relating to the Bactrian or Indo-Scythian part of Indian history, that the alphabet of the Bactrian-coins was only in use in Kabulistan and the Punjab, and ought therefore to be called Caboolan; my book is unfortunately written in German—I say unfortunately, because I should wish to hear your opinion on this and other views of mine. Will not M. Csoma Dekoros do me the favor to be my interpreter? Your additional corrections of the alphabet are very valuable, particularly the 𐨨 as s. So also your *Jayadharasa*. I suspect, that Nikatoros will turn out to be Jayavatasa, the translations being so literal, and we ought to expect two terms i. e. 𐨬 as different from 𐨫 and in my opinion ज. I have in my late reading attended much to the use of the different compounds of *pata*, and am persuaded, that only *apratihata* would be used for unconquered; *Apatihata* is in fact the very Prakrit form. For shortness sake, let me only state as a conjecture, that σωτηρος is tâdârasa from चातु on the coins of Andapherres. Tâdârasa or dâdârasa the ε being ड also in Minadasa. Not to be forgotten, is your Spalahara, *a capital reading* that destroys with one blow, all our lucubrations on the data of Vonones. It is evident, there was a Kabulian dynasty of *Arsacidæ*, coeval with that of Azas. I only propose to read 𐨲 differently, as it cannot well be a compound of s and 𐨨. May it not be a modification of k 𐨭, corresponding with the Zend ϑ, which takes the place of क्ष in Sanscrit? Spalyrius by the Indians was called Svalyrius, which the Greek alphabet expressed by ου. The Kabulians who called the river क्वव्व Shushva Choaspes, pronounced the king's name Shvalyrius or Galyrius."—H. T. P.

mahatô, as it will also have been upon R. R. II. No. 10; and then the name.

The state of these coins does not much invite inquiry after the name; but it being better preserved, than the rest of the words, we shall venture on the task.

As. Trans.	IV.	Pl. xxi.	No. 5,	has	
R. R.	II.	No. 10	..	....	
„ „	I.	„ 20	..	....	

Mr. Grotefend has read it *Vonohno*; it will be observed, the two n do not correspond, nor with the more confirmed l, not to mention the illegitimate use of h, perhaps to render the syllable long. Mr. Prinsep, who always adheres to the more cautious principle of reading out of the characters, not into them, takes it for *ulalidô*, which reading, however, cannot be right.

On examining more closely, we find, that two authorities are against the initial 𐬎; as many against the second 𐬐; the three last characters are identical (in the three legends); it would be therefore 𐬐𐬀𐬎𐬀𐬍. The second has the greatest similarity to an l, and the whole exhibits *Valaharô* or *Valahadô*. This is indeed very different from *Vonones*, which must have been expressed by 𐬐𐬀𐬐𐬀𐬌, if we have arranged the letters properly, and fixed the system of this alphabet.

I am persuaded, that the name cannot be the same, and as a conjecture is here quite indispensable, I shall propose the following.

The name of a Parthian king which will be first thought of, and which occurs three or four times, is *Volagases*. Upon coins, attributed to the former, or Arsakes XXIII. is the name thus written: ΒΟΛΑΓΑΣΟΥ. What now if this name be written on the reverse of our coins? 𐬎, h, rendered by g will not excite any doubt, if an h in the middle of a word is to be expressed by Greek characters. The termination alone does not agree, and here we may suppose, that by the sharp accentuation, the penultimate 𐬀 is changed into 𐬍. This being admitted, it would

be בלהז, *Balahazo*, as the Indian v is not different in pronunciation from b.

This result will be surprising, and I should hesitate in communicating it, unless it appeared a very natural consequence. But how to explain the matter.

Of the Parthian language we know nothing, and he that likes, may think *Vonones* to be synonymous* in the Parthian with *Valahazó;* or he may also obtain a really Indian word by writing only *Valahâsa*, viz. *he who contemns power*. I shall choose an interpretation less ingenious, but indeed based on better historical authority.

Volagases I. was the son of Vonones II. The father reigned a few months; his son, known by the wars he engaged in with Rome, is supposed to have reigned between 50 and 91 A. D.

Another Volagases is not spoken of in Parthian history as succeeding a Vonones. Have we not consequently both names upon our coins?

This conjecture appears to me so probable, that I scarcely hesitate to reject the acute one of Mr. Raoul Rochette,* who states, that it was Vonones I., the vanquisher of Artabanus; and even though Mr. K. O. Mueller takes this explanation as undoubtedly correct, the passages of Strabo, concerning the conquests of the Parthians in Bactria, mention neither of the two Vonones.

Another king, likewise not Greek, of this later period, offers another problem. Mr. Prinsep states his name to be Ipalirisos,† and we read indeed upon the coin v. Pl. XXXV. No. 7, ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΙΠΑΛΙΡΙΣΟΥ; the initial I of the name, however, is not quite distinct. R. R. I. No. 21, gives nothing of the legend but ΒΑΣΙΛΕΩΝ ΒΑΣΙΛΕΩΣ, and upon the reverse three illegible characters. Owing to the accurate drawing of Mr. Prinsep, we can supersede that of Mr. Masson, As. Trans. III. Pl. XI. No. 44. Upon No. 6 the name does not occur in Greek; the rest is distinct.

Mr. Prinsep has established his reading upon the comparison

* II. p. 28.

† As. Trans. V. 551.

of six well preserved copies, but the comparison is made by Mr. Masson, and he will excuse me in asserting, that the name of the king was not this; the native legend being preserved remarkably well, is thus upon both specimens of Mr. Prinsep: 𐨨𐨪𐨿𐨪𐨁 𐨯𐨪𐨿𐨪𐨁 𐨨𐨪𐨿𐨪𐨁.

Mahârâgó shall no longer detain us. With regard to *mahatakó* for *great*, I do only remark, that *maható* has here the additional termination *ka*, so frequent in Prâcrit;* there it would be *mahantakó*; our king was apparently fain to compensate by the adjective the loss he had to suffer on account of the substantive; for βασιλέως βασιλέων certainly carries the impression of higher dignity than *mahârâgó*, or it was perhaps the title *king of kings*, already so worn out, as to be of no more value than *mahârâgó*.

If we pass to the name, the penultimate letter ם (No. 21), must be, it appears, a sibilant, according to the Greek; in denoting it by s, I do not anticipate an examination, hereafter to ensue, in order to distinguish more accurately between ס, ש, ם. The ם will occur again as a sibilant. This being settled, the name is *Kalirisó*. But whatsoever alteration of the names the language of our coins may have admitted, according to its genuine laws, it could never have changed an *ipa* into k. I therefore maintain *ipa*, not to be the real commencement of the name.

What was it then? On this we are informed by the coin of *Spalirios*, connected at least by name; for it represents, As. Trans. v. Pl. xxxv. No. 6, iv. Pl. xxi. No. 9, (the e which is indispensable near l, is very indistinct upon the latter, and it does not occur at all upon the former), the initial letters by *kala—(kali)*; here (for the coin of Ipalirisos), we require only the initial letter, which we find to be a *ka* for the Greek σπα. I maintain, therefore, that the pretended *Ipalirisos* was called *Spalirisos*.†

Many will perhaps think this alteration impossible; but I am of opinion, that it may not only be vindicated, but that it is particularly adapted to confirm, in a striking manner, all that has been previously said on the nature of the language.

* My Grammar p. 288.

† Spalirishasa is Mr. James Prinsep's latest reading of this name from the Bactrian legend.—H. T. P.

Now we know, that the languages of Iran do not admit the Indian compound sv, for which they adopt another, more agreeable to the laws of their sounds. The junction of consonants, originally substituted for sv, is hv, as also h is used for a simple s. This hv, hardened in Zend, becomes kv or q, which simple sound is substituted for the Indian compound sv. The old Persian language, less hard in sound, softens the above mentioned hv in such a way, as to lose the h in u, so nearly related to v; the junction of characters, which corresponds in the arrow-headed writing to the Zend 𐎹, properly denotes therefore uv.* This alteration is foreign to the Indian Prâcrit.

According to my opinion, the k in the name, above mentioned, represents, as the Zendic q does, the compound sv, which is included in the Greek letters σπ. Sva might be expressed in Greek by σουα. But by supposing, that v was more hardly pronounced, (as for example the çv of Sanscrit indeed becomes çp in Zend), we shall not find the orthography σπ for sv very strange. And I shall not insist even upon maintaining, that those kings were called Svalyrios and Svalirisos; but I use only sv to explain, how k (equivalent to) 𐎹 may represent sp; This k is the third Iranian transformation of hv, in the process of which h becomes hard, as in Zend, but entirely drops the sound v, consequently sv in Sanscrit, hv, or q in Zend, uv in ancient Persian, k in the language of the coins, not yet geographically defined, (as to the countries in which it prevailed.)

But why then a double kind of pronunciation upon the same coin? If the name of the king was *Kalirisos* in the native language, why was it not the same in Greek? and how could it be written *Spalirisus* in Greek, if it in fact did not sound thus in the language of the country? A third view is still possible, which appears to settle the difficulty. The king, not being a native, was probably called *Spalirisus* or *Sualirisos* in his own language, but not in the language of the country, whose inhabitants were under his sway. They changed the name into *Kalirisos*, according to the system of their sounds, while the coin-stampers, knowing the Greek language, had no reason to call him otherwise than he did himself.

* The old Persian arrow-headed inscriptions, p. 107.

We shall now pass to *Spalyrios*, so similar in his name, who appears to oppose to us invincible difficulties.

I do not intend to dwell upon the view according to which the reading of the name has been already defined. Mr. Prinsep has here also the merit of having fixed the name, and the Greek legend, which is thus, ΣΠΑΛΥΡΙΟΥ ΔΙΚΑΙΟΥ ΑΔΕΛΦΟΥ ΤΟΥ ΒΑΣΙΛΕΩΣ. Three specimens are published, As. Trans. Vol. IV. Pl. XXI. No. 9, V. Pl. XXXV. No. 6, R. R. II. No. 9. The second of them alone has completely preserved the legend.*

The native legend is the following IV. Pl. XXI. No. 9, 𐨪 - - - 𐨫 - - - 𐨯𐨁𐨪𐨗𐨫𐨪 ; upon V. Pl. XXXV., No. 6, the initial letter of the first word does not exist; the second is preserved, and the well known word 𐨯𐨫𐨁, only 𐨫 is mutilated to 𐨗. The name itself is complete 𐨪𐨟𐨪𐨗𐨫. The last symbol has entirely disappeared on the foregoing coin; 𐨟 distinctly occurs; the two preceding letters are likewise there, though indistinct. At R. R. ——— the first word has got all symbols, but the first appears as 𐨗, the second is angular, and similar to r and d; the others are the same on all the specimens; *dhâmikô* is legible; in the name we can unfortunately discover only the 𐨟. Mr. Prinsep had three drawings before him, two by Court, and one by Masson, all three of which he found in exact correspondence; the legend he gives after them is the following 𐨯𐨟𐨪𐨗𐨫 𐨯𐨪𐨯𐨁 𐨯𐨪𐨫𐨪𐨫𐨯. The two first signs of the first word are taken from the drawing of Mr. Masson; the coin certainly has room for one symbol more, so that the complete first word would include seven letters; but for this there is only one authority.

With regard to the name, which I presume I have discovered in the last word, according to the examination of the name of

* See page 650, of Vol. VII. of the Journal. Mr. James Prinsep's latest reading of these combined inscriptions was

𐨯 𐨟 𐨁 𐨪 𐨫 𐨬 𐨯 𐨫 𐨪 𐨁 𐨯 𐨫 𐨗. 𐨗 𐨫 (𐨬)

s m r f l B s k me dh s l Pû râ h l h

Balaka'ra putasa dhamikasa Balafarmasa i. e. of Balafarma (or according to Mr. Lassen's Svalaformes) the just, son of Balahara (Svalahara): It is to this reading that Mr. Lassen refers in his letter above quoted.—H. T. P.

of the foregoing king, the mark of the vowel e is so often omitted, that we need not scruple at supplying 𐨤, as a vestige of it is almost extant upon one coin. But if the first two syllables are *kali*, the third must be 𐨪. For this the only distinct specimen has a character which we may take for r, to the head of whose angle a small circle is annexed. But then follows a sign which we may read as t, d, or r, and hence we are not allowed to take the preceding sign as r. The same 𐨿, however, denotes a Greek v upon the latest coins of this class. The most probable conjecture therefore would be to supply e with regard to the fourth character, and so far it would be read, *kalyri*. But now, according to the precedent of the previous names, there must follow 𐨨𐨁, jô, viz. Kalyrijô, instead of which we meet with a character which is merely to be read as an m. The fact, however, that 𐨨 follows 𐨿, is of main importance, as this being the case, the word is complete.

According to the specimens lying before me, this 𐨨 is not certain, and the entire reading is therefore left problematical.

Mó does by no means compensate for the expected jô; on the other hand the Greek writing in no sort authorises us to read OY instead of MOY. I cannot unravel this difficulty. Mr. Prinsep presumed, the word which I take for the name, to be the translation of *brother*, and supposed, that the word *king* was at the end of the legend. Against this supposition I have to raise the decisive objection, that the name cannot be expressed by the first word, and that, on the contrary, we can point it out on the most plausible conjecture in the third word. This being the case, the construction differs from the Greek,* and the *brother of the king*, or what corresponds to this word, occupies the first place; the legend, as far as I have observed, never commences upon these coins from below, in consequence, we have not to look for another word, preceding the first. Nevertheless it is possible, that the third word was followed by a title for *Spalyrios*, though there is left no room for a legend below, if the coins are exactly represented.

The first word seems to have been so well and congruously

* Mr. James Prinsep reads the Bactrian legend of the coins of Undopherras 𐨨𐨪𐨟𐨨𐨪𐨬𐨿 *Farahetasa Nandatasa*, which seems a preferable reading to this of Mr. Lassen.—H. T. P.

preserved, as not to admit any alteration of the letters. We dare only speculate, as to whether it have six or seven characters, and as room is left for the first (?) according to my previous remark, we may presume, that Mr. Masson was mistaken with reference to this letter. The word is therefore ?ᴘᴀᴛᴀᴅᴘ. This, however, is a complete mystery to me; neither do I know a word, which denotes *brother* or relation of any degree, bearing the least similarity to this, nor can I derive a proper signification from those syllables, though the end *(paró ? pádó ?)* exhibits a common Indian word. I must therefore leave this word to an inquirer who is more fortunate in guessing, or more acute in discerning.

Another barbarian king was named *Ynadpherres** or *Yndopherres*† (Undopherres) and styled himself βασιλέως σωτῆρος or βασιλεύς σωτὴρ; for the Greek legend gradually exhibits the nominative, which the native language used from the beginning, As. Trans. Vol. IV. Pl. XXIV. No. 5—8. The legends, which are much spoiled, supply each other's deficiencies as follow; I remark, that the name is to be read from within the inside, and not in the manner in which we usually read coins, by keeping the image on them in its natural position; this will be easily evident, if the letters are looked at in the usual way—

No.	5	gives	ᴘfᴛᴘᴛᴘ ᴘᴛᴀᴛᴘ - - - -
,,	6	,,	- - - -ᴘ ᴘᴛᴀᴛᴘ ᴘ
,,	7	,,	ᴘf - - - - - -ᴛᴘ ᴘᴛᴀᴀ
,,	8	,,	ᴘfᴛᴘᴛ

* Mr. James Prinsep explains this, by discovering the word *Pûtasa* after *Balahara* or *Svalahara*, and the difficulty does appear to be removed by this reading, which is quite reconcilable with the idiom of the language.—H. T. P.

† There is only one letter preceding N, namely Y. Mr. Mionnet reads likewise ΥΝΑΔΦΕΡΡΟΥ, and adds a *Sic?* Description de médailles antiques supplément, Tome VIII. p. 506. I only got this work, while printing my book. I am sorry to add, that the reading of the native legends is not only not advanced by the representations there exhibited, but the legends, which we may read without difficulty in the representations of them, given by Messrs. Raoul-Rochette and Prinsep, are perverted in an indistinct web of confused strokes. The false classification might be passed over, as it would not cause great impediment to inquiry, but I have taken sufficient pains with this work, to dare to assert, that to try to decypher anything with certainty from those copies would be labour in vain.

I have already before discussed the orthography of *dhâdhârô*, here it differs only in that it is placed before the word *king*.

By comparing the four specimens, we observe, that the name consists only of five native characters, and also that it ends in ô. The first letter 𐨤 of the word cannot be but a vowel in its initial form, and according to the course of the language, in other instances, we should have to adopt an e for v. As, however, the letter 𐨨 in the name Eukratides was fixed for this, the sense of both letters becomes doubtful; for 𐨤 being e, 𐨨 would be u, and *vice versâ*. I would rather adopt y for 𐨤, keeping the signification e for 𐨨; for we found above 𐨤 must be a vowel, which we know cannot be e, as e is never written in the line, while in the Greek the equivalent was v. The symbol 𐨤 often occurs in the legends of Manikyâla, and is certainly genuine. No. 22.

Between y and ô there are merely three letters for the three consonants d-ph-r, commencing the syllables, which we ought to admit, if the name was *Yndopherres;* in this case the n, preceding d, is dropped according to the rule. Also the second symbol is a real d upon one specimen; upon the second is a character, which appears indeed to be corrupt, but a corruption rather of n than d. If *Ynadpherres* be considered as the name, though the language of the coins would absorb d into ph, yet it would not express by any legible mark the d, so absorbed. We are here also left in the dark; but as d is much more certain than n, I shall at once decide in favour of d. Therefore yda stands for the first half. Then follows 𐨯; ξ being expressed by e, we must consider it as denoting phi; but we above found p for φ in Philoxenos, and shall do the same in Kadphises. The tolerably distinct coin of Kadphises has, however, (As. Trans. Vol. IV. Pl. XXXVIII. No. 3, as with Tod. Pl. XII. No. 10,) the form 𐨦 for pi; here the little cross line is perhaps meant to give the force to p as f. Our 𐨯 is entirely different from it; what might be taken for the mark of a vowel, is no e, and could at the most be u; this will not advance us a step further. On the other hand 𐨯 has a great similarity with the initial letter of Eukratides, and as ê is probably written in the line, according to the analogy of ô, we might read here

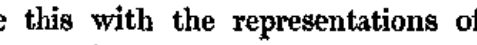
â, and conseqently yda: then would f be ph, and it has indeed the same cross line with the phi of Kadphises, but above a rounded, and not an angular shape; still I confess, I am by no means satisfied of the reading ydêfô.

But let us waste no more time and paper upon this barbarian chieftain, and rather wait for information from others.

We finally come to the last of those rulers, who shall here occupy us, namely Kadphises; Mr. Raoul-Rochette has baptized him *Mokadphises*. The reason for calling him Kadphises, is founded, as Mr. Prinsep remarks, As. T. V. p. 553, upon the fact, that Kadaphes is met with as a correspondent name upon other coins. And if that Scythian was called *Kadphis*, Kadphises would be a true Greek accommodation of the word, while the native language must either absorb d, whence *Kapisa* upon the coins, or to preserve d, it must separate this letter from ph by an intervening vowel. But as *Kadaphes* occurs without mo, the first supposition is more valid.

Upon his coins appear either the more simple legend—ΒΑΣΙΛΕΥΣ ΟΟΗΜΟ ΚΑΔΦΙΣΗΣ,* ΟΟΗ - - ΜΟ ΚΑΔΦΙΣΗΣ or ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝ ΣΩΤΗΡ ΜΕΓΑΣ ΟΟΗΜΟ (ΟΟΚΜΟ) ΚΑΔΦΙΣΗΣ†. The evidently barbarian word oohmo probably is the first part of the royal name, or a title. Mr. K. O. Mueller has proposed the very acute conjecture of reading *Ovohemo* or *Ohovemo*.‡

The native writing upon the coins of Kadphises seems always to present the complete title, or perhaps something more, for it is so small, and in the representation so indistinct, that we cannot derive any certain information but from examining the coins themselves, under the magnifying glass. Mr. Prinsep, who had the coins before him, has given the legend§



I will compare this with the representations of the coins for the purpose simply of pointing out the name.

* As. Trans. IV. Pl. XXXVIII. No. 1 No. 3 R. R. I. No. 22, Journ. des Sav. 1834, No. VII.

† As. Trans. IV. Pl. 631. R. R. I. No. 23 ditto.

‡ Goettinger Gel. Anz. 1838, p. 240.

§ As. Trans. IV. Pl. 632.

First, *Mahârâjô* is evident. In the next word the third as well as the sixth character must be different. It cannot be discovered from the scrawl upon the drawings. It must be רצוירצץ, *rájádirájô*. Then we have to expect רזץך, *tádhârô* (deliverer); and this seems indeed to be the next word, though in the foregoing legend it appears to be placed again at the end; ɪ has been already found used in common with ɛ, and if ד drops its small line on the right hand, we have: [ך]רזץ. But the same word seems to recur at the conclusion. Then must follow ורכך, *great*; for the second figure in Mr. Prinsep's copy occurs upon the coin, Journal des Sav. No. VII. א; also As. Trans. Vol. IV. Pl. XXXVIII. No. 3, it is therefore *mahi* or *mahí*; this resembles an Indian title, perhaps *mahipatí*, (lord of the earth). Thus we are quite at a loss, where to look for the beginning of OOHMO.

The ma of this word, however, is distinct, and fixed by the coins; the preceding sign, though indistinct itself, has the mark of e upon the coin, As. Trans. IV. Pl. XXXVIII. No. 3, just as e, was before substituted for ɤ; *dima* accords not with the Greek; it would rather be ך, ha. But this is doubtful, and for the two preceding syllables, OO can only hereafter show the proper reading, instead of the two ך.*

But there is no ך attached to ma, viz., no termination, for which reason ma rather appears to belong to the name, and not this alone, but likewise the preceding, so that the whole OOHMO perhaps was an element of the compound name. My design was merely to prove this probable.

In the name itself the copy erroneously gives ו for the ⊕ of the coins, consequently pi, or phi. We know already ר as denoting s; the next letter, however, is not a distinct ך upon any coin, it is rather like t, and as I have above mentioned, it might here be read *tá dhârô*. We might presume, that *Kadphis*

* See at page 646, vol. vii. the entire reading of the long Bactrian legend of the coins of Mokadphises—"*Maharajasa rajadhirajasa sabatrahca ihacha Mahiharasa dhi Mokadphisasa Nandata.*"

ורכך רצץירצץ ⊕ורץ ץרזץך ⊕ורץ

"Of the great sovereign, the king of kings, both here and everywhere seizing the earth, &c. Mokadphises the saviour.—H. T. P.

was to be read without any flexion, as other coins exhibit Καδαφες. The less reason is there then to connect mo, which has no flexion, with Kadphises. It is evident, that much is here left to be explained, but chiefly the word which has been proved superfluous, whether it be in the middle or on the end. We shall likewise mention the two symbols and , No. 23 and 24, as wanting confirmation.

The most ancient coins, on which appear the characters hitherto discussed, come down to about the year 180—160. B. C. The kings Yndopherres and Kadphises probably reigned in the first century A. C. A variety of the same characters, more like italic characters, but not essentially differing, is met with among relics in Manikyâla, where are discovered likewise coins of the Sassanides; traces of these characters are even to be observed upon the coins of the Sassanides themselves; we can therefore assign to this alphabet a period from the year 160 B. C. at least to the year 226. A. C., a period therefore of four hundred years. From Menandros and Enkratides to Yndopherres this difference alone is remarkable, that the characters of the native alphabet continue to be well formed and regular, while the Greek deteriorate more and more to a barbarian level. The italic letters out of the topes probably exhibit, rather the running hand in daily use, while the characters upon the coins represent the monumental form.

This remark may serve to introduce a variety of the writing upon the coins, of a peculiar spiral form, which we have no reason for assigning to a later period than to that of Kadphises, and which would therefore appear to be a provincial deviation from it.

§ 6.

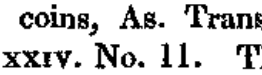
Variety of the characters of coins upon some coins of Hermaios.

I here bring together another class of coins, not yet very numerous, which, like the preceding, present upon the one side Greek, upon the other side native legends in a peculiar form of the alphabet, to which, however, Mr. Prinsep has already drawn our attention. As. Trans. IV. p. 347. Besides the Greek has become much more rough, and we do not know, if we meet with barbarian words, or with Greek ones in the dis-

figuration, effected by barbarian ignorance; the native characters appear at the first glance quite foreign to us.

We will first compare two coins, As. Trans. Vol. v. Pl. xxxv. No. 12, and Vol. iv. Pl. xxiv. No. 11. The one has the Greek legend, ΚΑΔΦΙΖΟ ΧΟΡΓ - - - ΚΟΖΟΥΛΟ, and supplies the other, where we find, ΚΑΔΦΙϹΕϹ - - - - - - ΝΟ, as it seems for, ΚΑΔΦΙΣΕΣ ΚΟΖΟΥΛΟΧΟΡΑΝΟ; for here is Ο generally a square, and Ϲ for Σ.

The native legend has:



iv. Pl. xxiv. No. 13 is not certain.

We are astonished at recognising in the first two signs after the cross, which recurs often upon these coins, and scarcely has the value of a letter, the last letters in the foregoing Kadphises legend, represented according to Mr. Prinsep. We may read them *nara (man)*. The letters, subsequent to this, are evidently in the common character of the coins , save, that here a round tail is substituted for the small cross line below, as the characters are generally altered from an angular to a rounder form. We find consequently *Kagala*, or if we read according to the Greek, the inherent *a* by *o*, as it is now also read in Bengalee, *Kogolo*, we have therefore here the un-Grecian word, which already occurred in the Greek writing.

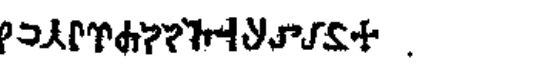
If we turn to the last word, the initial letter of it is y, the two last syllables are *vama* or *vomo*. Though we might take the second letter for , according to one coin, yet the others, belonging to this class, have always a character similar to , and the word consequently is *yhovomo*, which obviously is the word ooημo upon the coins of Kadphises; therefore is u, and we accordingly must infer, that the name in the foregoing legends had existed in the unoccupied space (of the legend).

Let us place these coins in comparison with all those, the relics of whose Greek legends are as follows: As. Trans. Vol. iv. Pl. xxiv. No. 9, 10, 12, v. Pl. xxxv. No. 10, - - ΛΕΩΣ ΣΤΗΡΟΣΣΥΛ□ - ΒΑΣΙΛΕ - - - - ΕΡΜ - ΒΑΣΙΛΕΩΣ - - - Ε□Υ, - and ΒΑΣΙΛΕΩΣ ΣΤΗΡΟΣΣΥ ΕΡΜΑΙΟΥ.

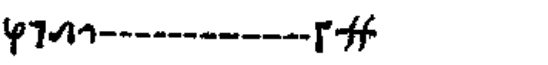
We have here an entirely foreign word ΣΤΗΡΟΣ. If this,

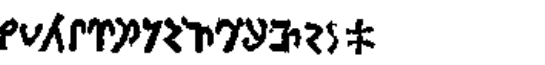
as Mr. Prinsep conjectures with the utmost probability, is to be understood as σωτῆρος, it proves, that the whole literary heritage of the Greek era had been completely transferred, when these coins were stamped, to the hands of barbarians. We likewise cannot explain ΣΥ by the instrumentality of the Greek language.

The reverse presents the following :—

IV. No. 9 

„ „ 10

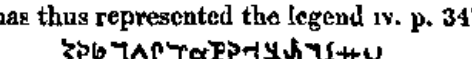
„ „ 12 

V. „ 10 

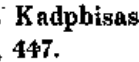
With regard to the last word, the second symbol is nothing but a disfigured h ; the v too is quite distinct, the non-existent e is probably exhibited by the coin IV. Pl. XXIV No. 13 as 𐨟 before 𐨪. I therefore read *Uhavima*, and look for this word likewise upon the coins of Kadphises*.

At the commencement there are again two symbols, but they differ, as well at this place as upon the foregoing legends, too much one from each other, so as to allow us to do any thing with them. Then follows again *Kagola* the word following would be read *Kavó*, according to the last copy, and it bears therefore the appearance of the nominative, but *Uhavima* not having got this termination, it becomes doubtful, whether we have to admit the flexion, which we took at other places for a regular termination. As *Kagola* and *Uhavima* evidently are no Indian words, we must consequently no longer expect the same termination. With regard to *Kavó* we might be reminded of the word in Zend for king, viz. *Kavá*, *Kaváêm* ;† but for the present it would be a

* Mr. Prinsep has thus represented the legend IV. p. 347.—



His division is certainly false. I had his own representations copied, and we shall look in vain for 𐨟 on the end of *Kagala* upon the coins. The h in *Uhavima* has the same form upon the coin below, p. 112.

Mr. Jas. Prinsep's last reading of this word is given in page 646 Vol. VII, and is as follows—  , Varahima Kadphisasa.—H. T. P.

† Burnoue Yasna I. p. 447.

conjecture, entirely ungrounded, as we cannot at all explain the following; not even the name of Hermaios is to be discovered, and we should probably find extant the name of his Scythian conqueror, together with what corresponds to the strange, ΣΥ.

Notwithstanding this obscurity, we may, however, derive some isolated facts from these coins; first, that the language is here no longer Indian. Thus *Uhavima* and *Kagala* do not admit of a natural and appropriate interpretation as Indian words. Both of them perhaps belonged to the Scythian language, and it appears cannot be explained, but with reference to the context. KOPANO agrees with the Indian dialect upon the Kanerkes-coins, which have PAO in place of the former Râjô; we cannot therefore allow of Κοίρανος. Nor can it denote *king* or *prince*, used as it is in immediate connection with PAO, king. Therefore upon the Kadphises-coins, where KOPANO appears in juxta-position with KOZOYΛO, the title of *king*, must be looked for, being probably KOZOYΛO, *king*. As these Hermaios-coins have the word βασιλέως, and give στῆρος as a Greek word, viz. for σωτῆρος, we must expect to meet with an equivalent for *deliverer* upon them; the plausible inference suggests itself, that *Uhavima* upon the reverse may be the Scythian word for σωτὴρ.

To this interpretation it may be objected, that *Uhavima*, being the same with Οοημο in the great Kadphises legends, is observed to follow σωτὴρ, and that consequently it cannot be the same term, but rather some native epithet of the Kadphises.

To this division belongs a third variety of Kadphises-coins, upon which ZAΘOY is substituted for KOZOYΛO; this also is a term for *king*, probably not of Scythian origin; for it occurs As. Trans. Vol. v. Plate xxxv. p. 553: KOPANOY ZAΘOY KAΔAΦEΣ.

I shall not undertake reading the native legend from the edited specimen, especially as Mr. Prinsep has promised to put together some other coins of this class.

KOPANOY and ZAΘOY are declined as Greek words, unless OY be not taken for a varied orthography of O: the barbarian name *Kadaphes*, on the other hand, is not declined.

Ζαθου calls to mind as well the Sanscrit *Kshattr* (man of the military caste) as *Khshathra*, the Zend word for *king*; the r in this case would have been absorbed on account of the softer dialect, while z was used for *khsh* (X) or rather for a softer pronunciation, perhaps *sh* as in *Pilushino* for Philoxenos. This interpretation being ascertained, we make the attempt at explaining also in the same dialects the word KOPANO, or XOPANO. *Kirana* (ray *quasi*, radiant) finally adopted by Mr. Prinsep, is not at all satisfactory, any more than *Karana* (to do) but Karana also denotes man of impure caste, son of an impure Kshatrija couple, or according to the opinion of others, son of a Vaishcha by a Soodra woman, whose occupation is the profession of a writer. By this interpretation we should have got two titles from Indian castes. But I am prevented from acceding to it by the fact, that XOPANO occurs with ZAΘOY, and that the combination of the different titles of this class of coins leads to σωτὴρ, as representing the word KOPANO; for the title *deliverer* is adhered to with such predilection by those Scythians, that we may ordinarily expect this meaning, and as ZAΘOY for *king* probably refers to a dialect, nearer related to Zend, I would rather look for an interpretation to that language. Here, however, it appears, it is not to be discovered; for though *qarena* is a word in Zend, the signification *(brilliant)* is not a proper one. The following, however, also speaks in favour of Zend. By the title KOPANO a tie is formed between the Kanerkes-coins, and those of the family of Kadphises, for both of them are thus styled. But then the other words upon the Kanerkes-coins refer to a dialect, which indeed also contains reference to India, but at the same time points at certain elements, more congenial to Iran.

While this class of coins, partly by the name *Hermaios*, partly by the title σωτὴρ, and by the combination of Greek and native legends, is linked together with the expiration of Greek dominion, it is also connected by the word KOPANO with the class of Kanerki coins of partly Scythian origin, the words of which, though not of the Greek language, are always written in Greek characters. The terms Ζαθου and Κοζουλο

as well as the form of characters, somewhat altered, are peculiar to it, whilst other coins with the name *Kadphises* present the characters, previously used. The real Kadphises coins have all symbols of worship of Siva, and the word ooημo, Uhavima, the *Karano*-Kadaphes, a Hercules.

To comprehend all the palæographic and philological facts, refering to our investigation, we must, before entering upon the attempt at applying these coins to history, at least touch on some other relics of this writing.

§ 7.

The legends in the Topes.

In the digging of the Topes, *(stoopas)*, which are so frequently discovered throughout the whole region, governed by the Indo-Scythian kings, and which were most probably destined for their ashes, some inscriptions are found in the same characters we have hitherto discussed, in a more running hand, however, and difficult to be read with accuracy. They are published by Mr. Prinsep, and I may refer to his accounts of them.* These inscriptions being important in more than one respect to our investigations, we should have made the attempt at their interpretation, if we could have done it, without departing too much from the subject, peculiar to this work.

But this departure would have been necessary, for the writing is more indistinct than that upon the coins, especially so the characters of the inscription, most ample and apparently most important. Though engaging therefore in tedious grammatical discussions, yet many things must have been left partly without any explanation, and partly under a mere doubtful interpretation, and from the decyphering, but partially successful, no profitable conclusion would have resulted, as respects the historical arrangement of the Indo-Scythian kings. Lastly, it would also have been necessary to have entered upon a consideration of the end, for which these remarkable architectural monuments themselves were constructed, and to have examined the views, which a celebrated German scholar has pronounced concerning them. The topes

* As. Trans. III. Pl. XXI. and Pl. XXXIII. It must be attributed to the inexperience of these characters at that time, that the inscriptions are reversed.

are much better adapted to a separate treatise, which may be published in time.

Here we shall merely call in question the view under which these monuments are deemed Buddhist. Buddhistic coins, exhibiting on the obverse the old Indian characters which occur on the columns of Asoka, and on the reverse those characters we are here illustrating, have been indeed discovered in India, but never in the topes. Hence appears it very surprising, that Buddhist kings should have had buried with them, various coins of the Romans, of the Sassanides, of the worshippers of Mithra, and even such as allude to the worship of Shiva and Vishnoo, excluding entirely (their own or) Buddhist coins.

We shall take from these inscriptions only what is confirmed beyond doubt. They first prove, that the native characters, adopted upon the coins by the Græco-Indian kings, out of regard to their subjects, were not only retained under the government of the first Indo-Scythian, but also continued to the period of the Sassanides; for in the topes Sassanian coins, furnished with Pehlvi, and Deva Nagaree legends, are discovered among the coins of Kadphises, and Kanerki. The characters of our coins therefore were still in use under the Sassanides, even after the time when the Kanerkes dynasty had abolished the use of the characters upon the coins in their empire.

The inscriptions, moreover, bear witness to the writing being used for other purposes than for inscriptions on coins; probably, however, by kings only of foreign descent, and who reigned on the borders of India. On this hereafter.

Lastly, with regard to the language; as the termination ô frequently recurs, and the word *Mahárájô** was discovered by Mr. Prinsep in the larger inscription of Manikyâla, evidence is afforded, that we fall in here also with the Indian language; the inscription at Jellalabad contains purely Indian words in Prâcrit.

Upon monuments of a later period than that of the Sassanides, no traces of the characters upon our coins have yet appeared.

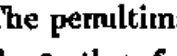
* As Trans. III. pl. XXXIII. second line, IV. p. 336.

§ 8.

Coins of Agathokles and Pantaleon.

We may now turn to another class of coins, those namely of the kings, above mentioned. The coins of both of them have genuine Greek characters, and those of Agathokles must be numbered with the most beautiful coins, which have been preserved, and belong to the most flourishing period of Greek art in Bactria, and the countries adjacent. Both kings hold to the simple title *βασιλέως*, but have besides upon the reverse of some coins, legends in the most ancient shape of Indian characters, of the very same shape which is discovered in Prâcrit upon the laths, thus styled, or columns with Buddhistic inscriptions in Prâcrit.

The merit of having decyphered these most ancient Indian characters, is also due to Mr. Prinsep, and I have here only to give an account of the manner he has applied them to these coins.*

The Agathokles coins (R. R. I. No. 1, As. Trans. III. Pl. IX. No. 17. V. Pl. XXXV. No. 9) present the following signs:  The penultimate alone is indistinct; Mr. Prinsep presumes it to be , therefore *Agathuklajég*, which he takes for the Greek genitive *Ἀγαθοκλεους*; I should rather prefer , or *jog*. Still it appears strange to meet here with a Greek rather than a native form for the Greek. That the Greek ς should be expressed by , or *j* may be explained by suggesting, that the final ς was received as a media (sound) like the z in Zend, to which j would be the most appropriate Indian letter. These coins had another word over the female Bacchanal, of which no undisputed characters have been preserved; it is perhaps, as Mr. Prinsep supposes, a fragment of *râja*.

In the name we observe also a mode of representing vowels purely Indian, viz. *a*, not expressed by a sign, and u, annexed below to the consonant, as also the ligature *ke*, which is completely Indian.

Of Pantaleon have only been discovered coins with legends, likewise in the same Sânscrit characters, As. Trans. vol V. Pl. XXXV. No. 8, III. Pl. IX. No. 18, excepting the first letter, the name

* As. Trans. VI. p. 465.

is preserved: 𑀧𑀦𑁆𑀝𑀮𑀯𑀦𑁆𑀢 Pantalavanta; the termination is wanting, and what Mr. Prinsep has supplied for it, tâ, appears to me unsatisfactory. Here, as with Agathokles, the hiatus in εο, and εο is amended by the insertions of a semivowel, in the latter *j*, and here *v*, as above, in the names *Dijamidó*, *Lisijó*. Besides, the use of the Anusvâra must be noticed, as representive of nasal sound. Upon the Pantaleon-coins, moreover, are only illegible fragments of the title; but two of these symbols lead to *rája*, preceded by something else, which perhaps formed originally *mahárájó*, "the supreme king." To the historical illustration of these coins, the only ones upon which Greek and purely Indian characters are put together, we shall afterwards return.

§ 9.

The Kanerkes Coins.

Lastly, come we to a very numerous class of Indo-Scythian coins, having only Greek characters, which seldom represent Greek words, but ordinarily give in Greek letters, either un-Grecian regal titles, or names of gods. They are of very different types; on the obverse, either a standing male figure in the dress of a Tartar, or a bust only; or else one mounted on an elephant; or, lastly, a figure, resting on a couch, with the legs crossed one over the other, after the fashion of the East, the head surrounded by a glory. The legend sometimes ΒΑΣΙΛΕΥΣ, sometimes ΒΑΣΙΛΕΥΣ ΒΑΣΙΛΕΩΝΚΑΝΕΡΚΟΥ, or ΡΑΟ ΝΑΝΟ ΡΑΟ ΚΑΝΗΡΚΙ ΚΟΡΑΝΟ or ΡΑΟΚΑΝΗΡΚΙ, upon those with the bust ΡΑΟΝΑΝΟ ΡΑΟ ΟΗΡΚΙ (ΟΟΗΡΚΙ or ΧΙ) ΚΟΡΑΝΟ; upon the others the same titles, with an illegible name. The reverses have various figures of gods, together with their names in Greek characters, but seldom in the Greek language, but commonly in a native one.

This result, which I have taken from Mr. Prinsep's laborious investigations, may suffice for the present purpose; I also refer to him for the fact, (As. Trans. iv. p. 630) that the coins never present legends in native characters.

I call the king *Kanerki*, because he so styles himself, when he assumes native titles. The form Κανηρκου appears to have ari-

sen from the mere misunderstanding of the Scythian die-founders. Observing upon the former coins ordinarily the Greek genitive in ου, on the reverse in the native language the nominative in ô, which did not sound very differently, they overlooked the different application. Κανηρκου therefore appeared to them the proper form, to be placed by the Greek titles, even when the use of the nominative was then adopted for the Greek legend. Thus is Κανηρκου put by βασιλεὺς, though *Kanerko* could be only properly used, when accompanied by *Mahârâjo*.

I have already previously professed my ignorance concerning KOPANO; it is singular, that σωτὴρ, according to our conjecture, corresponding to that word, never occurs, to my knowledge, with the word βασιλεὺς upon these coins.

Rao Nano Rao is certainly properly explained by Mr. Prinsep to be the same with βασιλεὺς βασιλέων; I add the following remarks on the forms. *Rao* (viz. *raô)* points to a dialectic difference, a step more distant from the original form, than is the form *rajô* of the other coins; for in the first place the consonant j is dropped, a proceeding indeed often resorted to in the learned Prâcrit; but whenever *râa* and *râjâ* are found together in the ordinary spoken language, the difference in form, refers to a difference in dialect. To the historic grammarian *raâ* is a later form than *râja;* however, it need have therefore arisen at a later period; for one dialect may have anticipated the rest in the reduction of the old forms; we may, or may not, therefore, refer dialectically *raô* to another province. Again, the declination of *rao* is not as the simple word *râjan* would require it should be, according to Sanscrit rule; but, on the other hand, the compound word *maharajah* is most properly brought under the declination in a; but as we do not know any instance of the simple word *râjan,* the parallel has no application.

Rao Nano can merely be the genitive plural. In Prâcrit it would be *rannam,* or after the declination in a *râ(j)â nam.* Instead of this, *Nano* seems to be the termination upon the coins in question, and this termination is not joined to *râa,* as to the root of the word, but to the nominative *rao,* and the m of the termination is changed into *no.* If I take a right view of the form *raonano,* it belongs to the period of transition, when from the

first degree of the decomposition of grammatical structure of the Sanscrit, evidence of which is exhibited to us in Prâcrit, the language was about to retrograde another step; thus, not distinctly comprehending the sense of the old form, the language then in use could no longer distinguish the peculiar form of the root from that of the termination.

The name *Kanerki* has been compared with *Kanishka*, which occurs in the chronicle of Çaschmir, and in the traditions of the Buddhists. I would not scruple at the r, as supplied by sh, and if the comparison of them was well founded, I would even proceed a step further, and find in Ονηρκι the same *Hushka*, who is mentioned with *Kanishka*. On the supposition, that Ονηρκι might stand for *Huirki*, and sh substituted for r, we could easily fancy *Huishka* to be altered into *Hushka*. But besides the difficulties in chronology, which I have not to enter upon at present, another reason from the coins themselves is opposed to our recognizing *Hushka* and *Kanishka* in Ονηρκι and Κανηρκι. Both of them are described as Buddhist; upon the coins of these latter, however, a worship, entirely deviating from that of the Buddhists, is distinctly obvious.

For these coins present on their reverse figures of gods, as to which, on a reference to the various religious systems, prevailing for the first centuries of our era in central Asia, we fortunately can be but rarely in doubt. The names occur with them, and in part quite legible. I may here refer to the explanation, most successfully given by K. O. Mueller,* on the system of gods, represented upon the Kanerki-coins. According to him, it is a system of typified gods, originating in the pure worship of Zoroaster's doctrine of light, which readily adopted the elements of the worship of Nature, prevailing in Asia Minor at that period, while it at the same time communicated to all the objects of worship, so adopted, the general stamp of *gods of light*.

With Mithra, it appears, was connected a very peculiar polytheism, which had utterly departed from the spirit of the unfigured worship of light, as taught by the original and true Magi; it also appears, that Mithra himself was considered in this worship as the solar god, Helios, as the *Sol Invictus* of the Roman inscriptions of later periods, and that a number of deified

* Goett. Gel. Anz. 1838, 237, p. 233.

beings are grouped around him, produced by the same combination of the religious elements of Asia Minor and of Iran. This religion was more congenial to the Parthians than the purer form of Magism. When under Arsaces VI, they conquered the sanctuary in Elymais, where the goddess Nanea was adored, and when they appropriated to themselves its treasures, they may have probably admitted the worship of this goddess under the name there used.* The Indo-Scythians, when in the time of Arsaces VII, and VIII, about the year 130 B.C. they roamed and plundered throughout the Parthian empire, found this worship already established, and a horde of the same people maintaining themselves for some ages in a remote corner of the Parthian empire, made it as entirely their own, as if it had originated with them. It must have been the same horde of this people of Nomades, which was ruled by the dynasty bearing the name *Kanerki*, as the coins of the *Kanerkis* alone, not those of Kadphises and Azes, exhibit the gods of this system.

Without as yet undertaking to determine chronologically the era of the *Kanerkis* and *Oœrkis*, I shall now content myself with collecting facts from the fragments of the language upon the coins, to apply them hereafter to history. Now as to this, Mr. Mueller has pointed out, with great minuteness and perfect correctness, as appears to me, two principal elements, included in the system of gods upon the *Kanerki* coins; deified beings, according to the doctrine of Ahuramazda, of Ormuzd; and, secondly, those taken from the religious belief of the countries of Asia Minor, viz. of Mithra, of Nanaja, and of the Persian Diana. This supposition is countenanced by the names of gods, which, as far as their interpretation is corroborated, are not derived from the countries of India, but from thoseof Iran.

I shall review the names of these gods, with regard to their derivation, and in effecting this, it will be my principal object to ascertain, whether Indian names be discovered among them, as the consequence of this would be, that the Pantheon of the Indo-Scythians received some additions on the banks of the Indus.

My whole task is here so beautifully prepared by Messrs.

* Strabo XVI. p. 744. Vaillant Arsac. imp. p. 41.

Prinsep* and Mueller, that I cannot do better than present their inquiries in a form, which assimilates with those of my own.

The gods are the following—

I. Mithra. A figure in the dress of the east, with flowing robe, the head surrounded with a circular nimbus of pointed rays, extending the right arm, and supporting the left on the hip, or leaning on a spear. M. 229.

Upon the coins, on the face of which Kanerki is styled *βασιλεὺς*, we observe ΗΛΙΟΣ; and ΜΙΘΡΟ where he is styled ΡΑΟ-ΚΑΝΗΡΚΙ; ΜΙΙΡΟ appears exclusively to belong to those coins where the name is already corrupted to ΟΟΗΡΚΙ. Mueller p. 236.

The original form in Zend is *Mithra*, to which the Μιθρί of the names of the Cappadocian months corresponds: hence is produced *Mihir* in Pazend, and Mihir (مهر) in modern Persia, which forms are connected with the Cappadocian forms Μίηραν (pronounced *Müran*) and Μναρ in a more corrupted form. In the same manner ΜΙΘΡΟ upon the *Kanerki* coins is transformed into ΜΙΙΡΟ, which latter must probably be pronounced *Mihiro*. (v. Mueller at the same place.)

I beg only to add, that *Mitra*, though in Sanscrit likewise denoting *Sun*, is merely one name of the sun among many others, nor is it distinguished in a way, that it can have given rise to this peculiar name of the supreme *Helios*. *Mihira* also denotes *sun* in Sanscrit, and though this cannot be corruptly altered from *Mitra*, yet it is to be derived from a Sanscrit root, as grammatists do. But it must depend wholly upon the fact being carefully ascertained, that *Mihira* was not only used in modern writings, but also in the Vedas to denote *sun*, whether we can approve of this derivation, or we have to bring back this word, together with the worship of the Indo-Scythians to India, after its corruption in the countries of Iran from *Mithra* to *Mihira*.

II. ΜΑΟ, the moon. A youth in the dress of the East, similar to the dress of Phrygia, with flowing robe, a kind of turban on the head, with a large half moon behind his shoulders, such as the *Deus Lunus* bears upon coins of Asia Minor, the situation in the whole, the same with Mithras. (v. Mueller at the same place.)

* Especially iv. p. 629, &c.

Mao is the nominative of the Zend form of *mâs*, the word indeed is likewise Sanscrit, as it is a common word of all the Asiatic languages, denoting the moon as a measure for time; the root is *mâ*, (measure) but the Sanscrit nominative is *mâs*. The forms Μαν, Μην, are only various off-shoots of the same root. The genitive MANAO, shortly to be alluded to, which presupposes the root MAN, appears to warrant, that the lunar god in the form he is possessed of upon our coins, was received from the West. But here may likewise be admitted the interpretation, that MANAO is to express the Zend genetive *mâonhô*. In this case *a* would have been substituted for *h*, which letter could not be expressed in the Greek language, while *âo*, the *o* of which, together with the succeeding *nh*, takes its origin in the *s* of an older form, probably was no real diphthong; but both *o* and *nh* together seem to express the nasal pronunciation, which precedes *h* in this position; the vowel *â*, as that of the root, was therefore alone expressed in the Greek orthography.

III. MANAO BAΓO, obviously a deified being, related to *Mao*; a large moon-like sickle therefore also appears with him behind the shoulders; he has four arms, leaning one arm on the hip, and holding symbols, not to be made out, with the three others; he is in a kind of Turkish dress, with large trowsers, seated on a spacious throne. (v. Mueller at the same place, p. 236.)

Mr. Prinsep has explained BAΓO by *baga* (Sanscrit) *splendour*; the word besides denotes, *beauty, glory, omnipotence*; and *Bhagavat*, is a name of Vishnu, as also a frequent epithet of gods. At the same time it belongs to the Zend, and even to the old Persian language, and on carefully examining the meaning of the word in them, it becomes evident, how this peculiar god of the moon is to be understood upon the coins. The four arms perhaps intimate Indian influence.

IV. *Anaitis*, NANAIA, NANA, strangely also called NANA PAO, a female figure, dressed in long folded drapery, having a nimbus without rays, and a tiara with flowing ribands, with the right hand holding a branch, or something similar. (v. Mueller at the same place.)*

The Persian *Artemis* has been long ago recognised in this goddess, the worship of whom Artaxerxes Mnemon endeavour-

* As. Trans. pl. III. No. 4 pl. XXXVI. No. 4.

ed to spread over all Persia, especially in Bactria, and it agrees with this supposition, that this Artemis, as Mr. Raoul Rochette has proved it, appears upon the Agathokles-coins as *Artemis Hecate*, bearing a torch, and triple-formed according to the phases of the moon. The word could hardly have originated in Iran, and certainly not in India; it is a goddess of the moon, and the grammatical form of the word is likewise feminine; so that the form PAO, by her name, seems to violate the rules of grammar.

V. *Athro*, AΘPO, an old man, bearded, clothed in a tunic, with a wide flowing robe, with the extended right hand (at least on many coins) holding a wreath tied to a long riband. The upper part of the figure is surrounded with flames, which leave no doubt, that here a genius of fire is represented, (v. Mueller at the same place). To Mr. Prinsep is due the well founded interpretation by the Zend word *âtars*. The word is here, however, transmitted from the grave declination *âtars* into the soft one *ath(a)ra*, (nom. *athro.*) In Sanscrit (of the classic period at least) the word *atar* does not occur in the sense of fire.

VI. OKPO. This word is usually met with near a figure, the lower parts of the person clothed, with the left hand holding a trident, and the right a snare, and leaning upon an Indian ox. Mr. Mueller reminds us, that this position is similar to the figure of Siva and his bullock, Nandi, upon the Kadphises-coins. The same name is also ascribed to a figure, standing opposite to Nana,* having a light dress, four arms, and the head surrounded with a circular nimbus without rays.

Mr. Prinsep has proposed to explain the word by *arka* (in Sanscrit, sun); this is doubtful, for besides that we have already the sun, Mr. Mueller very properly reminds us, that all the names, authentically explained, lead to a Zendic origin; likewise the reason for the transposition of *rk* to *kr* is not evident.

On the other hand, a Zendic word suited to explain OKPO, is not known, and besides another interpretation is indeed more to the point.

The bullock, and the four arms, call to mind the Indian god Siva, whose name is *Ugra*; the snare? *(pâza)* also is an attribute of Siva. By the coin, As. T. IV. pl. LI. No. I, it is still more

* Vol. IV. pl. XXXVIII. No. 7.

evident, that Siva is meant, when he as *pazupati*, (lord of animals) has an antelope with him. As to what Siva had to do with this system, might be differently interpreted; leaving, however, this to the mythologists, we would only add, that whenever Nana and Okro are placed opposite each to the other, Siva in this case is obviously interpreted in accordance with the character of Mithra. For the Indian Siva has the goddess of the moon only as attributive, usually as a moon-formed sickle over his head, here however stands the goddess of the moon opposite to him as his wife, as if she were understood as metamorphosed into *Parvati*; moreover Parvati has a strong resemblance to Artemis Hecate.

If this interpretation of *Okro* be well founded, (and so it must be by reason of the bullock *Nandi* upon the coins, As. Trans. IV. Pl. XXXVIII. Nos. 4, 5), an Indian element appears in the Indo-Scythian system, which as first annexed to it on the banks of the Indus, may be easily explained by the Siva worship upon the Kadphises-coins.

Okro as well as *Athro* point out a dialect, which allowed of no literal absorptions, and therefore was different from that exhibited in the native legends.

VII. OAΔO, As. Trans. IV. pl. LI. No. 8. A youth with a crown of glory, and a light dress. He holds, as he runs, with both hands, a wide robe, which falling down in large circular lines, surrounds the figure. (Mueller.)

The name is as yet unexplained; I propose *vâdô*, that is *wind*, (in Zend *vâtô*, modern Persian *bâd.*) In Sanscrit too, *vâtâ* denotes *wind, the god of wind*; more frequently *vâju*. As the wind is also worshipped in Zendavesta, and even as *vâto*, this element of Scythian mythology perhaps belongs to Iran. The running alludes to the wind.—

VIII. (A)PΔHΘPO, upon the coins of *Kodes*, As. Trans. IV. pl. XXV. No. 11, 12, and No. 13. A standing male figure, dressed in a tunic, with the left hand leaning on a spear, the right resting on the hip, flames round the shoulders, and a head dress, the shape of it indistinct. It stands there PΔHOPOY-MAKAP, which Mr. Prinsep* has acutely altered into APΔH-

* Mr. Prinsep observes, v. p. 643, that some copper coins have OPOOK-PO, and would explain it by *Arjarka*. According to my supposition,

ΘΡΟΥ ΜΑΚΑΡΟΣ. In the same relation as ΑΡΔΗΘΡΟ stands to ΑΕΡΟ, does.

IX. ΑΡΔΟΚΡΟ or ΑΡΔΟΧΡΟ to ΟΚΡΟ. The figure of *Ordokro*, however, is very different from that of *Okro*. *Ardokro* is represented as a woman in long clothes, with a circular nimbus round the head, in the hands a large cornucopia, usually in a standing position, but upon later coins, sitting on a throne, with the feet on a footstool (Mueller). Mr. Prinsep has proposed the very plausible interpretation, that the prefixed syllable ΑΡΔ might be the old Persian *Arta* in Artaxerxes, the Pehlivee *ard* in Ardeschir, and in similar names, therefore *venerable, holy*. But I strongly hesitate. How can *Ardokro* have a male termination, and female figure? Then *Okro*, substituted for *arka ardokro* would be a vox hybrida. The same will be objected to *Okro*, when substituted for *Ugra*. This is true, but if *Okro* was properly explained by *Ugra*, another interpretation is offered for *Ardokro*.

Ard perhaps in this case may be *Ardha*, meaning *half*,* and *Ordokro* is *ardhôgró* (*half Siva*, i. e. an androgyne Siva) as on the other hand *Ardhanari*, (*half wife*), is likewise used for this figure. This interpretation satisfactorily vindicates the masculine termination with the figure of a goddess.

X. ΟΡΔΑΓΝΟ upon a coin of Kanerki, As. Trans. IV. Pl. XXXVI. No. 1, Mr. Prinsep takes it for ΟΡΔΑΓΝΟ, from *ard*, and the Indian *agni*, fire. The coin however, has no symbols of fire,† and the legend gives ⊓ instead of N. I shall wait for further information.

XI. ΦΑΡΟ. At the same place, No. 2, an OOHPKI coin, with the robe, so frequently thrown behind with those figures, extending the right hand, the left supported on a long sceptre,

ΟΡΘΟΚΡΟ approaches more nearly Indian orthography. The figure on a very late and rough kind of coins, (see IV. Pl. I.) which is called the dancer, refers also to Siva. There seems to be ΟΡΟΟΚΡΟ too, p. 633. We find there the complete type of Siva Tripurântaka, the wild dance of Siva, who throws the giant to the ground. I refer to the representation by Tod, Trans. of the R. A. S. 5 p. 11.

* It is a figure armed with spear, sword, helmet and a wide robe.

† V. p. 640.

the head surrounded with a circular nimbus, very little different from Mithra himself. (Mueller.)

Mr. Prinsep (V. p. 640) calls to mind the names Phraates, Phraortes, Phradates. The last especially is very plausible; and Phradates might have been substituted for Pharadates; *Phara* would be the root for *Pharâ*. Mithradates and so many similar names are sufficiently known. Phradates cannot, however, be but *fradata*, i. e. *fra* cannot be but the preposition. I observe in Vendidad Sade, p. 50, a word *frâ* (bjô), which I, however, cannot explain.

XII. Mr. Mueller cites, according to the coin, vol. III. Pl. XXV. No. 11, another figure of a god, with the legend OΔYOBOYΛAKANA; ΑΛΑ, however is uncertain. I have no conjecture to offer whatever, (there is only one figure) on this word.

The word MAΘPO which Mr. Prinsep reads on some coins of the king, riding on an elephant (As. Trans. III. p. 453), perhaps is merely MIΘPO, a little indistinct. Thus we at least observe it upon one of those coins; vol. V. Pl. LI. No. 10.

I have thus subjected these coins also, as briefly as I possibly could do it, to an examination, with reference to their philological facts. The principal historical fact, resulting from them, that the dynasty of *Kanerki, Oerki,* and of their successors, however they may have been styled, were addicted to a doctrine, which compounded of those of Mithra and Zoroaster, cannot have been produced, but while they passed through Bactria to India, scarcely required so long a discussion; while on the other hand, as regards the religious history, a discussion, much more exact, must be undertaken, as many new materials will probably be supplied from additional coins. The mixture of an Indian ingredient in that mythology derived from the Siva worship, may be considered as a discovery, casually obtained. All these names of gods do not properly fix the native country of the coins, but bear the impress of those countries, in which the gods originated, and not necessarily or exclusively of the region in which the *Kanerkis* reigned, when the coins were struck by their order. The words of Zend, however, incidentally concur in proving the Zend to have been at that period the language of Bactria, and perhaps of Sogdiana. In a strict sense, PAONANOPAO and KOPANO alone hint at the native country of the coins.

§ 10.

Indian, Sassanian, and very ancient Indian coins.

We shall here only touch these two classes as the limits of our investigations, and as points, important for the critical illustration of the former classes. A discovery made by Mr. Prinsep, and fully examined in some treatises by him, gives both classes an unexpected reference to the foregoing ones, viz. that the Indian coins the most ancient we know, have been gradually formed partly out of the different species of *Kanerki*-coins, partly out of a peculiar class of Sassanian coins.*

This latter class scarcely belongs to the well known dynasty of Persia Proper, whose coins are brought for sale to the bazars of Cabool, (As. T. VI. 289) but a collateral line of the Sassanides must have reigned in Cabul, and Beghram. At the latter place a great number of their coins have been discovered. We observe two different kinds of them, to which a numerous division of coins is joined, already entirely Indian, and having Nagari legends. These latter shall here no further occupy us.

The first class of the coins, strictly Sassanian, consists of small copper coins, which may be divided, after the head-dresses of their images, into three series: one coin of this class is published by Mr. Masson, As. Trans. v. Pl. XLIV. The legend appears hardly to be in the characters, known to us. The second class is chiefly distinguished by a buffaloe's head being over the head of the king, and by the fire altar on the reverse. Their legends seem to be a species of the character of Sassanian Pehlvi as found on coins, but they also have Dêvanagari letters, As. Trans. VI. Pl. XIV. No. 3. No. 5. No. 6.

By this they are connected with a class, a few specimens of which are only discovered, two however in Manikyâla. They have the complete Sassanian type, with the exception of the fire altar, with legends in Dêvanagari, As. Trans. III. Pl. XXI. p. 439. VI. p. 288. A third of these coins from Cabul (As. Trans. III. Pl. XXV. No. 6.) distinctly has the name श्रीवासुदेव

* See chiefly As. Trans. IV. p. 621, p. 668, then vol. VI. p. 288. Specimens of Hindoo coins, descended from the Parthian type, though the word Parthian in the title for Sassanian is not at its right place.

Crîvâsudêva. Beside these legends, others in Pehlvi characters are met with. A *Vâsudêva* is related by Muhammedan history to have been king of Kanôja about the year 330 A. D.* As. Trans. IV. p. 348. He is perhaps the same, the coin of whom is extant.

The first of the classes, above mentioned, of the Sassanian coins from Kabulistan, proves, that a separate (independent) dynasty of Sassan's descendants have reigned there; the second class proves, that a dynasty, related to it, or the very same, ruled in India itself, perhaps in the Punjaub, (to this conclusion we are led by the Indian characters), and that it gradually gave way to purely Indian kings; for *Vâsudêva* is certainly an Indian name.

Mirkhond indeed mentions the name of the king of Cabul, as of an independent king, the daughter of whom the Sassanian Hurmuz, the son of Narsis, married.†

I think I still can point out a new kind of coins, referring to this division.

Swinton has already published a coin, which he calls Parthian‡. The head of a king is there surrounded by the following Greek legend: BACI-ΛΕΩΝ ΜΕΓΑC-MO—, while the reverse has a Roman Victoria, and a legend in a character, which Swinton proposed to read, (upon the pretended similarity with Palmyrian letters), *Padeshane mo(nesh), Emperor Monneses*.

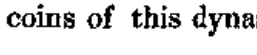
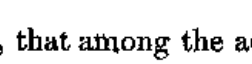
On this *Monneses* as on *Adinnigaus* of which affinitive coins exist, Ekhel arrived at the result, that they were not Parthian,

* This Vasudêva perhaps belonged to the dynasty of the Guptas' which we find in India at the same period with the Sassanides, of whose names Mr. Prinsep has already restored a long series according to coins, As. Trans. v. p. 536. One of them, Kandragupta, boasts in the second inscription of the column at Allahabad, not long ago authentically published, of having received tributes from the kings of Persia and Saka. The expressions, are very remarkable: देवपुत्रषाहिषाहानषाहि the Shah, born of God, the Shah of Shahs, "which exactly is the title of the Sassanides upon coins and in inscriptions. The proper name is unfortunately not mentioned. As. Trans. VI. p. 977.

† De Sacy Antiquités de la Perse, p. 304.

‡ Philosophical Transactions—vol. L. Pl. I. p. 115. Pl. IV. No. 1, another coin, which Swinton ascribes to Balogases III. (vol. XLIX. p. 593) has also relics of native writing, which however is not distinctly Cabulian.

but Bactrian kings.* Mionnet† arranges both under the kings *Characene*, upon the authority of Visconti, who first properly determined the coins of this dynasty, (Iconographie Grecque. III. p. 260.—)

I do not find, that among the acknowledged coins of *Monneses* any one is noted, which has upon the reverse a legend in native characters, and supposing that the *Mo* upon the coin of Swinton supplies *Monneses*, this king was not a native of Charax, but of Cabul; for the native legend obviously is the following:  viz. in the ordinary form:  (ma)hârâjô rajâ dirâjô.

The writing has exactly the strokes of the characters in the topes.

The head dress of this coin has rather a Parthian than a Sassanian character, as the victory also intimates a Parthian, not a Sassanian dynasty. The form of the native character leads us, however, almost down to the age of the Sassanides, and certainly fixes Cabul as the native country of this coin The existence of the Greek writing must, however, prevent us from assigning this coin to a later period than that, when the Greek writing was still in use upon the coins in the countries of Iran. The Sassanides never made use of it, as far as I know, upon coins, and with the Kanerki-coins it fell into disuse in the border countries of India. The coin may therefore belong to the period, preceding that of the Sassanides.

The type of the coins, which are proved to refer to *Monneses*, is at variance with the supposition, that the king on the coin under discussion was likewise called *Monneses*. But as there now is none in the series, known to us, of the Parthian kings, whose name commences with Mo, we must be allowed to suppose, as of the Sassanides, so of the Arsakides, a collateral line to have established an independent kingdom on the borders of Kabulistan. But it would be proper to examine, whether the initials preserved of the name rather be not ME, in this case *Meherdates* might be conjectured.

To return to the real subject of this chapter, I conclude these remarks by observing, that no Indian imitation of the Kadphises-

* Doctr. num. vel. I. vol. III. p. 560. † Tome VIII. p. 510. V. p. 706.

coins has been hitherto discovered, and I shall pass to the inferences, which may be drawn from the facts adduced.

First.—The Kanerki dynasty have probably survived all the others of foreign origin, the Sassanides excepted, as the coins of the Kanerkis gradually slide into Indian types, which those of the others do not do.

Secondly.—The use of the native writing did not cease with the downfall of the Kadphises-dynasty, for it still exists upon the topes, which entomb coins of the Sassanides as well as of the Kadphises and Kanerkis, and the coins of the Sassanides are besides of a more recent form, than that used on the coins of Agathokles. The Pehlvi character under the Sassanides, the Cabulian character on the topes, and a form of Devanagari, much approaching to the modern one, existed therefore together.

Thirdly.—The types of the Kanerki-coins in the last period exhibit such a great decay of the art of die-cutting, such a total oblivion of all traditional remembrances of Greek art, that we must on this account too conclude this dynasty to be the last before the Sassanides. The Sassanides moreover had a different religion. But we will not dilate too much on these inferences; for as we do not know when the Sassanides settled themselves in Western India, we cannot dispute that the Kanerkis may have held out for a long time in the time of the Sassanides. Nor is it allowed from the extinction of the native characters upon the coins of the Kanerkis and from its existence upon those of Kadaphes and Yndopherres to infer, that the Kanerkis universally and simultaneously supplanted the Kadphises; for the very existence of the coins upon the topes in which Kanerki-coins were already enclosed, proves that the writing, as being on the coins, was still in use when Kanerki-coins were already struck; it proves, that there were other reasons for not adopting that writing upon the coins, than the abrogation of the characters of the legends; or, in other words, the coins do not prove that the Kadphises did not reign at the same time with the first Kanerkis. But it will be more advisable to look, if possible, for some other, and better defined leading points, before attempting to set ourselves right in this field of speculation, confused as it is by the entanglement of dynasties.

SECOND PART.

APPLICATIONS TO HISTORY.

§ 11.

Geographical points.

We shall now attempt to comprehend under some more general points of view, the materials, obtained by independent inquiries, applied detachedly to different subjects. We may perhaps thus succeed in grouping these single facts into classes properly arranged.

The results of inquiry separate themselves into three divisions, being partly paleographic, and partly philological, from both which (together with those results which the numismatological examination will bring to light,) follows a series of historic facts, which are to be compared, and brought in accordance with the relics of written history, as it is delivered to us.

From the foregoing inquiry it has been proved on the whole, I hope, that the countries, in eliciting the history of which these ancient coins have unexpectedly presented themselves as a novel documentary agency, are the western boundaries of India. The coins have been partly discovered in western India, especially in the Pentapotamia (Punjab); and the tope of Manikyâla, between the Indus and Hydaspes, has been a principal source of discovery, though it is only one among a number of many others on a smaller scale. They are also found in the regions along the Cabul river, and especially abound in the ruins of Beghram, a town at the southern entrance into the Indian Caucasus, situated if not exactly, yet very near the place where Alexandria ad Caucasum was founded. The whole course of that river, however, is a mine of coins, and the favourite site of the topes, coeval with and witnesses to that period, to which the more recent half of our coins, not the work of Grecian kings, appertains.

Though the more eastern part of India, viz. the (Doab) land between the Zatadru and the Jumna, as well as the country

in the north from the Indian Caucasus to Bactria, have contributed their share to our treasures, yet they have done it only in an inferior degree. Now if the place of discovery of coins may point out the country in which they originated, the Punjab and Cabul are those to which must belong most of the names of kings we have examined. It is therefore necessary more carefully to set ourselves right as to the geography of those countries, with regard to Bactria, and the other parts of India; as regards this, however, the general information possessed by our readers will be amply sufficient. Without extending this geographical inquiry, we may be allowed to refer, as respects the Punjab, to a published work* which indeed now requires some additions and corrections, but which yet contains all the statements, most important for our purpose.

With respect, however, to the countries about the Cabul river, where the boundaries of Indian and Iranian alphabets, languages and nationalities are fixed, where the empires to which we have to assign their situations come most closely in contact, and seem to intrude one into the place of the other, and for the historic geography of which, there exist sources not fully consulted, as regards those countries, it appears to be indispensable to attempt an independent inquiry, with constant reference to the points to be discussed in the course of examination.

As between Hindoostan and the highlands of Tibet, the Himaleh, properly so called, is the wall of separation, so is the western continuation of the same mountain range between the countries belonging to the Cabul river, and Bactria; we may call this western branch the Indian Caucasus or Hindookush. From the point where the Indus, descending from the north, breaks through this mountain range, it first runs, in about the 36th degree of north latitude to the meridian of Jelalabad; the western extremity of this circle nearly coincides with the 35th degree of north latitude. These mountains, viewed from the southern low land, appear as a four-fold chain of towering hills,†

* De Pentapotamia Indica commentatio geographica atque historica Bonae, 1827, 4to.

† Elphinstone; an account of Cabul, i. p. 154. 2 edit.

the fourth range of which being the highest and nearest to the north, rises to the level of eternal snow, and has at least partly an elevation of 20,000 feet.

The Hindookush further runs from the point presently described north-west, and then westerly, till it attains its culmination with the elevated snow-clad peak, properly denominated the Hindookush. The mountains then gradually descend towards the west, assuming the name Paropamisus, while the higher range, turning south-south-westerly, rises again in the Kohi-Baba to a high snowy pinnacle. Under this lies on the westerly side, Bamian, which therefore has a northerly, and not a southerly aspect; this is the discovery of Burnes.

These vast mountains, the Indian Caucasus in its most extensive sense, from the point where the Indus breaks through them to Kohi-Baba, are the northern boundaries of the countries about the Cabul river. From this range most of the tributaries of the Cabul river descend, and it gives the country its prominent features. We must look at it therefore more closely.

At the western extremities of the first eastern half of the Indian Caucasus, a high tract of mountains stretches down to the valley of the Cabul river; its southern extremity from the northern bank is thrown opposite to the Sefidkoh, (in the Afghan language *Spin Gur*), viz. white mountain, which rises on the southern bank of the river; this southern end is the high snow-clad peak, Kooner, very nearly approaching to the valley of the river. We shall give this transversal range the name of the Kanda mountains, as they were probably called so in the native language. The whole of the countries about the Cabul river are equally divided by them into regions of a totally different character, the western and the eastern.

To know the boundaries of the country under consideration, we must recur to Kohi-Baba. Hence extends a high mountain tract to the south. Though no remarkable hills, no table heights are mentioned as existing among them, yet the course of the streams would range in their favour. The Hilmund and Urghandab descend from that mountain tract in a southern direction to the basin of the Zareh; the Ghazna runs to the north-eastward, and joins the Cabul river, flowing to the south-east.

South-westward from Cabul there lie, says Sultan Baber,* "high snow-clad mountains, and the Bamian chain (Kohi-Baba) is of an extreme height. The Hirmand, the Sind,† the Doghabeh, Kunduz, and the Balkh rivers all rise at their culminating point, and one may, it is said, drink on the same day out of the sources of all these rivers."

These are the natural boundaries of the countries of Cabul towards the west.

From the mountain tract, where Ghuznee lies southward from Cabul, to the Sefidkoh, already mentioned (which may be considered as the most northern branch of the Soliman mountains, running from the north towards south) the valley of the Cabul river is bordered by hills of less height and regularity. They have not received any general name, and but small bodies of water descend from them, as they are not high enough to be continually covered with snow.

Looking again from the Sefidkoh to the point projected from the south of the Kanda mountains, we have the confines of the western half of the Cabul countries. The valley of the river, narrowed by the Sefidkoh and Kooner, appears like a rocky gate between the west and the east of the countries through which the river forces its way, over cliffs and down rapids, while from Sefidkoh the Tira chain of hills with its ramifications extend eastward to the Indus. The Salt range, so called, commencing from the same point, runs south-easterly to the same river, which it reaches at Karabag; the Tira chain rises from the south over the plains of the Cabul river.

Thus once more gaining the Indus, we have compassed the whole extent of the Cabul countries, the natural boundary of which towards the east is that river.

The eastern half of these lands may be called the *inner*, as may the western half, the *outer* boundary of India.

To understand the articulation of each of these boundaries, we must look closely to the rivers.

The Cabul river, which rises at the foot of the Kohi-Baba,

* Memoir, p. 282, German translation.

† A mistake, it must be the Cabul or Gurbund.

and flowing from Cabul itself in an almost direct line, joins the Indus at Attok, forms as it were the bond, by which the various members of these geographical divisions are connected, and proves their inseparable unity.

From the high mountains to the north there run to the banks of the Cabul river many streams in valleys, which are either distinct, or connected with others; each of these valleys, and in an inferior degree every lateral valley, forms an independent district, and hence the various articulation of the whole.

With regard to these valleys, which we may call after their rivers, all the streams having the most easterly direction, viz. the Abbasin, which is furthest east, and the Burrindu, a little more to the west, flow into the upper Indus, without passing through the Cabul districts.

More to the westward rises the Sewad, into the valley of which river that of the Penjkora runs from the west, while the Bagar from the south-eastern declivity of the Kanda mountains joins the united Sewad and Penjkora. In the latest map (by Burnes) the three united rivers are called Lundye, which having passed Hashnagara, disembogues into the Cabul river.

These valleys, descending in terraces towards the Cabul and the Indus, form the mountainous country of the inner boundary of India to the north-west, to which also belongs the plain above the valleys on the banks of the river, as well as the northern declivity of the Tira chain, before mentioned. The plain is hot low land, already manifesting a completely Indian character; Peshawur in the centre of this plain is situated on the banks of the river. The northern districts of the valley form landscapes of a genuinely Alpine character, adorned with all the luxuriant beauty of an almost tropical mountainous country.

Now between the eastern and western extent of the Cabul country lie the Kanda mountains, with the Sefidkoh as a high wall of separation, which cannot be appropriated to either of those districts. From the central point, whence it spreads its ramifications from the Hindookush to the southward, another high elevation rises, the Belut Tag, which extends in a circle NNE. to the Mustag, and forms, as it were, the northern

continuation of the Kanda range. From its north-eastern extremity, the Pushtigur, a river now called Kameh, gushes rapidly southwards, and forces its way between the Cooner and the Nurgil in the Cabul valley, almost opposite to Jelalabad. This narrow and almost impervious valley rises like a long narrow gateway in a northerly direction; on the north side of the Pushtigur the streams already flow to the Oxus. The Kameh valley supplies but few accommodations for trade with the north, it is little accessible from the plain of the Cabul, it is rather a wall of separation to the east and the west of the whole country along the river.

From Sefidkoh a valley of a more remarkable character opens towards the Cabul river, through which the Soorkhrood, ("the red river,") flows.

Just above Jelalabad the boundaries between the warm low lands of the east and the cooler highlands of the west, are determined; this little district of Jelalabad, on the river Cabul and the stream formed by the junction of the Kameh, and the Soorkhrood, may represent the gate, through which we enter the outer boundary of India.

Cabul lies almost in the centre of this boundary, and is at least in a historical and political point of view, the centre point of the country. In her neighbourhood, rivers from the south-west, the west, the north-west, and north, unite and form the main river, which has obtained the name of the town. At this spot open the great roads, whether for peace or for war, between Iran and Turan on the one hand, and India on the other. It is a situation, possessed of inexhaustible importance, as the whole history of southern Asia bears witness.

Looking on the subject in detail, we find, that due west of the lofty Kanda hills the valley Laghman splits in two, forming those of Alishung and Alingar, and opens towards the Cabul river.* More to the west the valley of Tugow is traversed by a river of the same name, not far below the disemboguing of the Panjhir. This river takes three united streams into the Cabul, namely, itself, the Gurbend, and the Nijrow, which

* Elphinstone, i. 160.

all descend from the Hindookush through main valleys, in which less considerable bodies of water are discharged, giving the effect of the fibrous ramification of a leaf in the union of these river valleys. The Gurbend, rising in the western range of the Hindookush, flows to the east, the Panjhir from north to south, while the Nijrow runs in a south-western direction to the Panjhir. The district above the junction of the three rivers, is called the Kohistan, the highlands of Cabul, a beautiful Alpine country, not inferior to that of Penjkora, and Sewad; below that junction extends the more even country of Kohdâman, "the skirt of the mountain." This variously ramified system of valleys includes the passes, which lead from Cabul itself, over lofty mountains, winding upwards through their vallies in ramifications, either westward to Bamian under the Kohi-Baba, or northward over the Hindookush, to Anderab and the higher north. There are altogether seven or eight of these.

On the southern boundaries of this western district of the Cabul we have to notice the valley of the river Ghuznee, which leads to the town of the same name, lying on a rugged lofty plain, the ancient seat of mighty dominion.

Hence goes the road to the river valleys of Arachosia, descending westwards.

The plain of the valley of the Cabul river, before it reaches Jelalabad, lies in a situation so much higher than that of the lower part of the river, that the climate and products are as different from those of Peshawur, as are the products of loftily placed, and frigid Ghuznee from those of Cabul.

As the outer boundary constitutes a gradual approach to the inner one, so is it in relation to India Proper. Cabul is one of the most beautiful countries of the earth, highly praised by Sultan Baber, warm in virtue of its southern situation, and the protection afforded by the mountains towards the north, and at the same time cooled by reason of its height above the level of the sea.

This very succinct description was specially intended to call to mind the following facts.

First.—That the natural road to India passes through western Cabulistan, whether we start from Arachosia, from Aria (Herat)

or from Bactria, the paths from the northern and central Asia meet here.

Secondly.—It must not be forgotten, that the districts along the Cabul river have a tendency to resolve themselves into petty states and national confederacies, unless a vigorous hand sways the sceptre within the country. The country does not only separate of itself into an eastern and western division, but, if circumstances admit, small independent powers may also maintain themselves in the valleys of the northern tributaries of the main river.

Thirdly.—Supposing such a state of disorganization to exist, each of these little river districts will seek its centre in itself, and create a petty capital. However, in a state of well ordered union, some particular *foci* of intercourse along the course of the main-road, about Peshawur for the eastern, and Cabul for the western Cabulistan, about Jelalabad, as connecting both, and for intercourse with the Kameh valley—lastly, at the entrance into the passes over the Hindookush on the low lands round Beghram—must be formed by the course of mercantile transactions. To render these relations quite evident, we may observe, that the peculiar architectural monuments of the country, the topes, are grouped round those four mentioned places, Peshawur in the valleys of the Khyber tribes, Jelalabad at Soorkhrood, Cabul itself, and, lastly, at the foot of the mountain district round Beghram.

For the purpose of giving a sketch of the historical accounts of this country, we may commence by observing, that we must especially keep in view accounts as to the national characteristics of those people, without engaging in a complete inquiry into the passages of the ancient geographers. We shall postpone this to a more appropriate place, and besides, there exists already a very thorough examination of this kind by an eminent geographer.*

By way of beginning on a safe basis, let us commence with the celebrated campaign of Alexander the Great.

* Carl Ritter on the campaign of Alexander the Great in the Indian Caucasus (in den Abhandlungen der Berliner Akademie aus dem Jahre 1829, p. 137.

He found these countries and nations in the state which must have subsisted during the whole period of the Achæmenides; for the rulers of Persepolis in succession to Darius, the son of Hystapes, who perhaps exercised a more vigorous authority, were satisfied with the attendance of those remote nations in the field on occasion of war, and with the regular transmission of tribute; they did not disturb the tribes in their national customs and institutions, though they were powerful enough to check the violent inroads of the northern hordes, by whose success national characteristics were afterwards introduced of a totally novel description.

When Alexander after having subdued the Drangges and Arachosians set out for Bactria, he encountered Indians for the first time.* Having subdued them, he reaches the Caucasus, and founded on its skirt an Alexandria, the situation of which, according to the careful examinations of Mr. Masson† must be most probably looked for near Beghram. The Indians above alluded to, therefore inhabited the highlands, which separate the streams running to the Helmund, from the tributaries of the Cabul. Strabo calls those Indians *Paropamisades,* but uses, however, as he often does, an inaccurate term, when he states, that Alexander had penetrated to the Arachosians through the Paropamisades.‡ The passage through their country during the winter season was difficult on account of the large quantity of snow, but it abounded with villages and provisions for the army; it was the highland westwards from Cabul.

We again follow the march of Alexander, when returning to Alexandria Sub-Caucaso; he passes for the second time the Hindookush, the town is then called Alexandria in Paropamisades.§ These Indians are therefore obviously called by a peculiar name, after the mountains, viz. *Paropamisades,* the name of the mountains which they inhabited, being partly Paropamisus,‖ and partly Caucasus, and this name refers as well to

* Arr. III. 28. † As. T. V. p. 6.

‡ XV. Ariana, § 10. § Arr. IV. 22.

‖ Ptolemy, more correctly Paropanisus; it is the country under the mountains, which are called Nishada in Indian geography. That the ancient geographers have assigned the name Paropamisus to the more western mountains, we are not authorized to assert.—(Lassen).

the Hindookush itself, as to its western parts, the Kohi-Baba, and the lower ranges, which at the lower extremity are protended in a westerly direction. With the nation of the Paropamisades must also be numbered those tribes, who inhabit the valleys of the northern tributaries of the Cabul, viz. of the Gurbend, Panjhir, and Nijrow; for Alexander formed a new Satrapy out of the districts of the Paropamisades, καὶ τῆς ἄλλης (χώρας) ἐς τε ἐς τὸν Κωφῆνα ποταμόν.

The Kophen is not,* however, as might be supposed, the Panjhir, with his two tributaries; for by starting from Alexandria, which upon this conjecture must have been situated at the Kophen, one would come first to this river; we find in Pliny† "ab ea (Alexandria) ad flumen Copheta, et oppidum Indorum *Peucolaitin* CCXXVII." Whether Peucolaitis be correct here or not, is besides the question. The Kophen evidently is, we may say, the united Ghuznee and Cabul rivers, and the Satrapy of the Paropamisades is the Kohistan and Kohdâman of the present geography of Cabul, together with the mountain vallies on their western boundaries.

Till the arrival of Alexander at the river Choes, Arrian (VI. 23) uses no other names (than the above); the intermediate country to the junction of the Choes (Kameh) with the Cabul, may therefore have belonged to the Satrapy, not the nation, of the Paropamisades‡

Strabo§ says, "near the Indus there are the Paropamisades, above the heads of whom the mountain Paropamisus rises."

* Arr. III. 22.

† VI. 21.

‡ Pliny VI. 23 'says' "some authors still add to India the four Satrapies, Gedrosia, Arachosia, the Arians, and Paropamisades '*ultimâ fine Cophete fluvio.*' Is now the Cophen the extreme boundary of India with the addition of the Paropamisades? This would be an absurdity, and Pliny does not recollect, that by adding the Paropamisades to India, he had not to describe the remotest confines of the Paropamisades toward India, but the boundary of India, enlarged towards the west. He has therefore retained the boundary of the Alexandrian Satrapy of the Paropamisades, at the same time, that he gave it up. The reason upon which those Satrapies were numbered with India, was an incidental one, viz. the cession to Sandrokyptos by Seleucus Nicator.

§ I. 1. § 9.

But this is to be accounted for by a similar negligence in expression, as Strabo sometimes commits. He afterwards places certain nations between the Paropamisades and the Indus, which is a striking contradiction.

The following statement of Strabo is of far greater importance. According to him, the whole country between the Indian sea in the south, and the Paropamisus and Caucasus on the north, the Indus in the east, and Karmania, Persia, and Media, in the west, is an immense square, which is comprehended under the general name Ariana; the Gedrosians, Arachosians, Paropamisades, in parallel layers are superimposed one on another. We shall not dispute the systematical regularity of this view, in favour of which the Paropamisades are extended to the Indus. Ptolemy, who distributes in the same manner these nations, and defines more correctly the boundaries of the Paropamisades, does not use this general term, nor does it occur in the narratives of Macedonian history. Strabo has perhaps got it from the Parthian and Bactrian history by Apollodoros. It is true, he says, that the name Ariana likewise refers to some tribes of the Persians, Medians, Sogdians, and Bactrians, or, (to apply here our modern information), that the ancient name Aarja of the Arians, was also in use with the four principal nations of Iran, before mentioned, but he distinctly places between the western and northern Iran, properly thus called, and India lying more to east, his Ariana, as a separate division, as an intermediate country, in which the nationalities balanced towards both directions, and were neither of a marked Indian nor Iranian character. But more precise investigation would certainly prove, that his view, concerning such a great nation, forming a transition from the Persians to the Indians, though it generally were correct, still must be defined more correctly in various points of view, to bear upon the different divisions (of that nation). The Airjana of the Zenda vesta, however like in name, has certainly nothing in common with this Ariana, though many be pleased to confound them.

We must hereafter take up again the thread of the inquiry, what situation between the Indians and Persians the Paropamisades have occupied?

Alexander, after having arrived at the Choes (Kameh) commences on the western bank of the Indus his campaign against the nations, in a strict sense here already called Indians. They are named by Arrian, numbering them from west to east, Aspasians, Guraeans, and Assacanians.* Strabo styles the nation, first mentioned, Hippasians,† and substitutes for the Choes the Choaspes, which disembogues into the Kophen (§ 26) and which therefore cannot be, as it occurs upon the map of Ritter, another name for the Kophen. Aspa is a term, alluding to Persian language, and Choaspes (qazpa) is the river of beautiful horses; there is an evident reference of the nation with the river, and they probably lived on its banks. Alexander first marched upwards to the Choes. *Πορευθεὶς δὲ παρὰ τὸν Χόην καλούμενον ποταμὸν ὀρεινήν τε ὁδὸν καὶ τραχεῖαν, καὶ τοῦτον διαβὰς χαλεπῶς, κ. τ. λ.*

He reduces there two towns, the second of which was called Andaka, he then proceeds to the river Euaspla. *Καὶ διελθὼν πολλὴν ὁδὸν, δευτεραῖος ἀφίκετο πρὸς τὴν πόλιν.*

After having taken this, he passes over the mountains to Arigaeum.‡ I must here depart in view from our celebrated geographer Mr. Ritter, who thinks Euaspla to be the Choes, but it must be a tributary of the Choes which Alexander touched, *διελθὼν πολλὴν ὁδὸν*, and after he had already marched into the Kameh valley. Alexander first left this lateral valley of the Kameh, when setting out for Arigaeum. Euaspla now is partly a Greek translation, (*εὖ-ασπλα* perhaps *εὖ-ασπης*) of Choaspes (hu,gut Sanscrit svhazpa-quzpa).

Strabo by taking the Choaspes for the Choes, viz. the smaller for the larger river, has confounded both of them, while Arrian separately mentions them. Choaspes, or Euaspla, probably is the Seesha upon Mr. Elphinstone's map.§

* IV. 23.

† XV. § 17. § 27.

‡ Arr. IV. 24.

§ I am under the necessity here also to contradict the excellent historian of Alexander the Great, Mr. Droysen. The point at issue is especially the following passage of Strabo, § 26. *Ἀλέξανδρος—ἐπέστρεψεν—καὶ τὸν Κώφην ποταμὸν καὶ τὸν Χοάσπην, ὃς εἰς τὸν*

The Aspasians probably are the same with the Azvazeelas of the ancient Indian geography, who are neighbours of the Kambôjas, fighting on horseback.

The Guraans are the inhabitants of the valley at the river Guraeus, (Arr. IV, 25) the Penjkora, into the valley of which Alexander descended near Arigaeum; the Guraeus, according to Arrian, retains this name to its disemboguing into the Cabul, while Ptolemy only mentions the Sewad, the Suastus. Gorydale was probably situated just at its very disemboguing.

The Assacanians in their towns Massaga and Ora had their abode between the Guraeus and the Indus.* From them there are distinguished the Astacanians, who are no doubt justly taken for the subjects of Astes, the ruler of Peucala, the district on both banks of the Indus, above the disemboguing of the Kophen.† According to Ptolemy, the Gandarians inhabit this country, who live therefore on the northern bank of the Kophen, while Strabo relates of the Gandaritis, living on both bank of the Kophen; he follows here the native view, according to which Gandhara denotes the country from Peshawur to the Indus.

The Massianians, mentioned by Strabo, are too insignificant to be inquired into, and we shall leave it to others to deal with

Κώφην ἐμβάλλει ποταμὸν, καὶ κατὰ Πληγήριον πόλιν ῥυεὶς παρὰ Γωρυδάλην πόλιν, καὶ διεξὼν τήν τε Βανδοβηνὴν καὶ τὴν Γανδαρίτιν.

Mr. Droysen says (history of Alex. p. 376) we need only to omit καὶ preceding Πληγήριον to find every thing correct. Now if the sense, not the syntax alone must be in accordance, ὅς and ῥυεὶς and διεξὼν would be referred in this case to the Choaspes, disemboguing upon this conjecture through the Gandaritis into the Indus, i. e. the Choaspes would do what is due to the Kophen, which Strabo himself mentions as the main river. There consequently is also a confusion in the views of Strabo, an unprecise understanding of the reports, and the words following ἐμβάλλει ποταμὸν are indeed to be referred to the Kophen. Hence it follows, that Plegerium, Gorydale are towns, and that the districts Bandobene and Gandaritis to the disemboguing of the Kophen into the Indus successively are met with.

* Arr. IV. 26 Ind. I. Strabo, XV. § 27.

† Droysen, history of Alex. p. 374.

the fabulous Nysaeans. We have mentioned every important fact for our purpose by adding, that Alexander did not touch the southern bank of the Kophen, since he was informed, that it was not fertile, as the beautiful land of Alps in the north.* We therefore meet between the Paropamisades and the Indus a series of independent, warlike mountaineers, under their chieftains, separated into many smaller tribes, rich in flocks and herds; they are always called Indians, though no mention is made of either institutions characteristic of India, nor of Brahmins. This is doubtless correct; for they were inhabitants of the Indian frontier, not exactly regulated by Indian customs, outcasts of the soldier caste, as Indians might term them.

As mention has been made of the Gandarians, we are allowed to combine these accounts with those, long before given by Herodotus. The Gandarians he mentions, must be the same with those now under consideration. Darius also enumerates them among the number of the nations under his sway. Herodotus does not mention the general name of the Paropamisades, but only single tribes, among whom the Sattagydes perhaps belong to the Paropamisades of a later period.†

In these accounts the national discrepancies between eastern and western Cabulistan appears most evident, the western half belonging to the Paropamisades, the eastern to India.

Ptolemy's accounts are contemporaneous with a period referred to in some of the coins; the additional value his information thus acquires, is enhanced by constant perspecuity of detail and expression.

He considers the (Κῶας) Koas (VII. I.) as the main river, as it indeed has a much longer course than the Cabul or Cophen, which stream is not mentioned at all. Hence according to him, the Koas disembogues into the Indus, and the Suatus (in the Indian language Subhavastu, the Sewad) into the Koas. He knows the sources of the latter in the mountains of the high north, which he calls the mountains of the Komedes.

Under the sources at the Koas there live the Lambagæ,

* Strabo, XV. 26.

† Old Persian arrow-headed inscriptions, p. 110.

(Lampatæ) whose hilly district extends to the mountains of the Komedes, hence up the valley of the Kameh and into the Caucasus over the Pengkora or Guraeus, a country of wide extent, while in Sanscrit *Lampaka* denotes only the inhabitants of the valley Lamghan, on the western side of the Kameh valley. Ptolemy's authority gives us evidence, that the restriction of that name (Lamghan) is of a more modern date, and that the derivation of the name from Lamech, according to Sultan Baber's conjecture, is a wholly vicious etymology. The peculiar Lamghani language, prevailing in this mountain valley, together with the language of the inhabitants of the higher Kameh valley and the Indian Caucasus, viz. of the Kafirs, thus called, is an Indian dialect, and the separation of the Lamghanians and Kafirs into different nations, as is the case in Cabul, is not founded upon any original national discrepancy.

According to Ptolemy, the Koas is the most western river of India, however, he does not consider it as the boundary river, but in his opinion, the confines between India and the country of the Paropamisades are the meridian, in which the sources of the Oxus* are included; he places them one degree more to the west than the Koas, and therefore according to him, a district westward from the Koas still belongs to India, which as it appears, is inhabited by the Lambagæ, *he* (Ptolemy) mentions; for the present Lamghan is included in the very same district to which Ptolemy has assigned no other inhabitants. These national boundaries almost completely coincide with the political demarcation between the Satrapies of Alexander, viz. between that of the Paropamisades and of the Upper India.

Looking to eastern Cabulistan, we observe, the district Suastene lies, according to Ptolemy, at the sources of the Suastus; it is therefore the same that Elphinstone has called Upper Sewad.

He places the situation of the country Goryaea (Γωρυαῖα) below the Lambagæ and Suastene. This is the district between the Bagur and the Pengkora, and on the other hand, that to the Lundye, in the north of the Cabul river to the mountains, which include the Kameh from the east.

* VI. 18.

The name Goryaea is therefore used by Ptolemy, as it appears in a more comprehensive sense, than the name of the nation of the Guraei is ordinarily used by the ancient (geographers). The evident carefulness with which Ptolemy always proceeds in the applications of names, renders it not improbable, that he had good reasons in using that name in a more comprehensive sense. Goryaea (perhaps Gârjâ in the language of that country,*) seems indeed to point to an expression like *Kohdaman* in our days, (west from the Kandar hills,) the mountain district below the highest ranges of the snow-clad peaks.

Ptolemy places between the Suastus and the Indus, the Gandarians, to whom the town Proklais (Poklais) is appropriated; here then the Gandarians are restricted to the northern bank of the Cabul river; for Proklais is the *Peukela* of the ancients, and the *Pushkala* of the Indian geography; according to Strabo the Kophen still runs through the Gandaritis. The dominion of the Gandarians, as it appears, is therefore restricted to the northern mountain valleys, and Ptolemy is instrumental himself in explaining this. In describing the extent of the Indo-Scythian empire, he observes, that its main part is situated along both banks of the Indus, but he also places Indo-Scythian towns just in the country along the lower part of the Cabul river, i. e. just in the old seats of the Gandarians. Among them Artoartar appears even to be the capital or the royal camp of the horde. Artoartar is there a foreign word, and arta reminds one rather of the Parthian than of Scythian elements of the language, it is the *arta* of the names Artaxerxes, Ardeshir, &c. But since upon Scythian coins *Athro* and *Ardethro*, consequently Persian names of Gods are observed, it is no wonder, that we meet likewise in their towns with elements of Iran.† Artoartar having

* From *gari*, in Sanscrit *giri*, mountain, Zend *gairi*; there consequently perhaps *gari*. The modern word in Affghanian language is *gar*, but hence it does not follow, that Goryaea must be derived from that language.

† Artoartar 121° 30', 31° 15'. Nagara 121° 30', 32° 30'. Divertigium Coae ad Paropamisades 121° 30', 33° 0' the juncture of the Cabul and Kameh, Nagora and Artoartar were therefore situated in the same meridian. But since the course of the Indus as well as the country bordering to it is displaced much too far towards east and west, the real situation of those three places cannot be looked for in the same meridian.

been ascertained as a town of the Scythians in the country of the lower part of the Cabul river, gives evidence, that the Gandarians had at that period no longer the dominion in their native country, and it offers itself the conjecture, that an independent power of the Gandarians maintained itself only round Peukela. Of the towns which Ptolemy still mentions as lying in these Indian confines, Νάγαρα ἥ καὶ Διονυσόπολις is especially notable, *Nagara*, a genuine Indian word, is the name of the town, it therefore probably had with the Indians the meaning of the principal town of this district. The term "*town of Dionysos,*" cannot be attributed but to the Greeks, who full of the expedition of Bacchus to India, thought, that they recognised even in this town the vestiges of his energies. If Ptolemy has correctly fixed its situation, it would lie opposite to the mouth of the Kameh. As, however, the whole country is assigned another position in geography, this only is certain in the statement of Ptolemy, that Nagara was situated on the southern bank of the Cabul river, not far from Jelalabad. Below Nagara there follow four more towns, assigned to Indo-Scythia, Nagara itself is not numbered among them.

When we now turn to Ptolemy's description of western Cabulistan, this is, in his opinion, the country of the Paropamisades.* The eastern boundaries toward outer India are already defined; Jelalabad and Lamghan belong to India. Bactria borders it in the north, the natural confines there being the Hindookush; in the south is Arachosia, from which the Paropamisades are separated by mountains under the name Παρῶται. Mr. Ritter asserts, probably correctly, that they begin at Sefidkoh, and extend to the table land of Ghuznee†. It is indeed a very general term, *parvata*, mountain, and the name recurs for the northern tribe of the Arachosians, viz. Παρυῆται; as it is the same name, so it is undoubtedly the same nation, the mountaineers on the right bank of the Ghuznee river. Ptolemy supposed these mountains to extend from east to west, while they run south-west. He fancies, as does Strabo on the authority of

* VI. 18.

† See the map to the essay above mentioned.

Eratosthenes, that the country is a square, and on this supposition he defines the place of the different nations. The *Cabolitæ* live according to him, towards the north, namely in the valleys of the Gurbend and Panjhir; the town *Ortospana* or *Cabura* in the centre of the country (which is certainly identical with the modern Cabul), supplies their name. The *Aristophyli*, a Greek name, have their abode in a westerly direction towards Aria; we must look for them below the Kohi-Baba. Further down are seated the *Pabii*, or after another reading, the *Parsii*; the *Ambautæ*, lastly, live in the east, and are therefore the neighbours of the Langhani; this name has likewise turned out useless, and we cannot draw any conclusion from it.

It is strange, that Ptolemy does not mention the tributaries of the Cabul river in this part of Cabulistan, it is said, at least he does not; however, the river Γωβρύας, into which another disembogues, is probably the Gurbend, and the nameless river is perhaps the Cabul *itself*, the Kophen of old, of which there is made no mention.

Of the names of towns, Cabura has been already touched on; traces of the town of Alexander have disappeared at this place, and it is difficult to look for it under another name among those that Ptolemy noticed; but we shall still make especial mention of one among them. *Artoartar* recurs here, as it were to show us the old seats of the Scythians, from which they started for the Indus. It lies in a north westerly direction from Kabura, and just in the mountains, where the passes lead from the sources of the Cabul river to Bamian.

In the statement of Ptolemy it appears much more distinctly than in those of the Macedonian period, that eastern and western Cabulistan were likewise, in a national point of view, separated into two equal divisions, almost consentaneous with their natural boundaries; the western half belonged to that nation, whose separate tribes are comprehended under the general name of the Paropamisades; the eastern is numbered with the Indians; but the plain at the lower part of the river is now under the power of the Indo-Scythians, and perhaps only Nagara, and the Gandarians give the appearance of independent Indian nationality. It is a great loss, that Ptolemy does not furnish us with

any information on the political statutes of western Cabulistan. Upon these, as well as upon the national relations, a much clearer light is thrown by those accounts, of which we shall presently make use. We allude to the reports, given by the Buddhist Chinese travellers, which are contained in Abel Rémusat's posthumous work, so important to Indian geography.*

There are three such reports, the most ancient of which is, however, alone completely published. First, the report of Fahian, who in the year 400 A. D. made a pilgrimage to India.† Secondly, that of Soung Yuntse and Hoeiseng, who in the beginning of the sixth century were in India.‡ Lastly, the report of Hiuan Thsang, who came to India about the year 632 A. D.

As these travellers were Buddhists, and pilgrims to the holy places of their belief, this religious purpose is the prevailing subject in their narrations, and they omit many things on which it would have been of far greater importance to us to obtain information. But their narratives, as given by eye-witnesses, are invaluable, and we observe no trace of their having told what was not reported to them, or what they did not see, or imagine they saw. Their estimates of distances, when referring to extended measurements are indistinct and exaggerated; fortunately they mention so often places easily to be recognised, that we can generally set ourselves right without difficulty in the countries they have enumerated.

But if I now venture to differ in many instances, as to the interpretation of these Chinese narratives, from Abel Rémusat and his two successors, Klaproth and Landresse, as well as from our celebrated geographer Mr. Ritter, I have briefly (for the detailed exposition of this Chino-Indian geography must be reserved for another place) to vindicate my deviations.

Rémusat first of all displaces and alters the situation of all the countries of western India by supposing, that the Indian district *Gandhara* is the same with Kandahar (in Sanscrit *Kandadhara*.) Then, according to him, Fahian visits *Tchuchachilo* or *Tant-*

* Foe Koueki, &c.
† p. 3.
‡ p. 354.

chachilo, which the Chinese, however, only described by hearsay; and as Fahian does not mention his having gone there over the Indus from the west, Rémusat inferred, that the situation of *Tantchachilo* must be on the western bank; but it is in fact the *Taxila*, (*Takshazila* of the Indians) between the Indus and Hydaspes, Rémusat was therefore under the necessity of displacing all the districts of the western Indian frontier, too far westerly. We may again trace, in the report of Hoeisang, the confusion of Gandhara with Candahar, and the river *Southeou*, which is but the Indus (with Fahian *Sintheou*) is removed to Kandahar. I undertake to prove these assertions good in all their details, if their correctness be disputed.

I shall now state, with regard to every province, the grounds on which its situation is fixed.

Udjâna, *Outchang*, as it is called by the Chinese, according to Prâcrit form, *Ujjanâ*, (garden, park) is bordered by the Indus to the east;* the name of the capital is *Mengholi*, (*Mangala*, the fortunate), and it is probably situated in the valley of the river *Souphofasoutou*, as they call it, or of the Zubhavastoo, the Sewad, or Suastus. Fahian mentions, however, not by name two other rivers, probably the Penjkora and the Bagur. If Rémusat says, the country was bordered by Kandahar in the west,† we observe in the original *Kiantolo*, (or *Gandhara*). This has lead Mr. Ritter to the mistake of looking for Udjuna near Jelalabad,‡ but it lies to the northward from Gandhara, therefore on the northern side of the Cabul river.§

We extract the following notices from the copious collection of Chinese narratives published by Rémusat. The name is said to have been given to the country by an Indian king of old, who was wont to hunt here; it was his park. Baber also used often to hunt here. Besides the Buddhists, there also resided here a number of Brahmins, who were much devoted to astrological inquiries.

Buddha is said not to have advanced beyond this. Here we still find Indian letters, and an Indian dialect, but no where

* Fahian, p. 45. Hiuan Thsang, p. 380.

† p. 46.

‡ Erdkunde, VII. p. 289.

§ Foek, p. 379.

beyond, i. e. towards the north, where the Caucasus forms the natural separation of the nations. But Hiuan Thsang says, perhaps with more exactitude of definition, that the language is Indian, though with some deviations.* Udjana is many times mentioned as an independent empire in the Chinese annals between the years 400 and 642 A. D.

The little principality Suhoto was situated southward from Udjana, and westward from Kiantola beyond the river (Cabul), if one set out for it from Kiantolo.† This definition is not very clear, it must be about the country within the angle between the Kameh and Cabul, on the northern bank of the latter. Kiantolo (or *Kianthovei)* is bounded on the east by the Indus,‡ the situation of the town *Foe-chafou* was in a westerly direction, three journeys distant from the Indus. (p. 355) Westward thence was the town Kiantolo, with the tower of the king Kanishka; the same town is also called *Poulouchapoulo*, or *Foe-Leoucha*, and *Paloucha* seems to be a variety of *Foechafou*. North-eastward fifty *lis* beyond the Cabul river (about fifteen miles), there was situated the town *Pousecolofati*, (or Pushkalavati,) the district attached to the town Peukela on the Indus, the *Peukelaotis* of ancient writers. The way from the Indus to Peshawur is estimated to be three journeys;§ in this town we recognise *Foechafou*. This country is the Gandaritis of the ancients, the Ghandhâra of the Indians, and the concurrent testimony of the Chinese narratives does not at all admit its being extended to Kandahar. The capital, the name of which in the Indian language perhaps was Purushapura, *town of men, town of heroes*, is to be looked for, it appears, in the country of Khybers. There is yet a tope, larger and more splendid than that of Manikyâla,‖ but this can hardly be the tower of the king Kanishka.

Fahian describes *Foeloucha* as an independent little state; the repetition of the same account proves, that the capital of Kiantolo, and the town *Purushapura*, and this *Foeloucha* of the

* Foek, p. 381.
† Foek K, p. 64. p. 45 p. 355.
‡ p. 379.
§ Tieffenthaler's description of Hindoostan, 1. p. 46.
‖ As. Trans. III. 327. VI. 879.

three reports is the very same with the tower of the king Kanishka. From Peshawur Fabian takes a southern, Hoeiseng a western direction to arrive there, the Khyber mountains lying to the southwest.

This *Parushapura* is the same from which Remusat, and after him Mr. Ritter* presumed to infer, that the *Belujens*, strong favourers of Buddhism, already existed at that time. I do not know whether Mr. Ritter will allow these Belujens of his to break a lance with a critic.

From *Foeloucha* westward to Nakie there are sixteen jôanas.† Hiuan Thsang corrects the name into *Nakoloho;* he comes there from *Lampho* (or Lamghan), crossing the great river (Cabul); it is a distance of 100 lis, or a little more than five geographical miles.‡ *Nakoloho* lies in the valley of the river *Hilo*, where is the town Hilo, one (geographical) mile from the capital, a mountain is also called *Hilo*, at which *Nakoloho* was situated. (p. 86. p. 54)

This river on the southern bank of the Cabul cannot well be any other than the Soorkhrood, and we must look for the town *Nakoloho* at the mouth of the stream in Balabagh. The Buddhist monuments, said to be near *Hilo*, are the same with those on the Soorkhrood from Balabagh to Jelalabad. (As. Trans. III, p. 325.)

I imagine I recognise the river *Hilo* in the Hir of the map of Danville and Rennel, at the junction of which with the Nilab, the town Nagar is situated; there is another river Hir to be accounted for in accordance with the different narratives, which is said to pass the town of Cabul. If now *Hilo* certainly be the same name, *Nakoloho* also appears with the same certainty a Chinese paraphrase for Nagara.

This leads us again to the Nagara of Ptolemy, which must needs be situated westward from the curvature of the Kameh river. On account of the evident similarity of the names the conjecture will be admitted, that his Nagara is not different

* Erd. VII. 678.

† p. 85.

‡ p. 378. The five miles must be taken from the places nearest to both banks of the river.

from *Nakoloho*. His Artoartar might coincide with the town *Purushapura* of the Chinese.

For *Hilo*, and *Nakoloho*, (or Hir and Nagara) another supposition is possible, the correctness of which I have not the means of deciding. If namely, near Jelalabad, itself a tributary, falls into the Cabul, this might be the *Hir*, and Nagar, the Jelalabad. The name *Hir*, however, leads of itself to Soorkhrood, (red river) if the Indian word *hiranga*, (gold, of gold colour,) may be recognised in it, and besides in the latest descriptions of Cabulistan, no other notable river, except the Soorkhab* is made mention of. The architectural monuments of this country, moreover, which commence at Balabagh, are not discovered more than four (English) miles beyond Jelalabad. This circumstance, and the fact, that Lamghan lies opposite, led me look for a higher situation for Nagara on the banks of the river.

Nakie in the year 628 A. D. was subjected to the empire *Kiapiche* on the Gurbend, it was the boundary district between Gandhara and western Cabulistan.† The town was sixteen jôanas from the capital of Gandhara, or, according to others, fifty *lis* in a northerly direction from it beyond the mountains,‡ a distance of about twenty-five geographical miles. Tieffenthaler estimates the way from Soorkhab to Jelalabad at twenty-four (miles), and the capital of Ghandara cannot have had a much more eastern situation than Jelalabad. The way of Hiuan Thsang, however, did not follow the river, but the mountains, and it was perhaps more direct.

To set ourselves right in western Cabulistan as to the Chinese description of it, we must begin with Hiuan Thsang's entrance from the north into the country. He goes from Bamian eastward over the snow-clad mountains, then over those, called *The Black*, and is then in the country *Kiapiche;* the distance is not stated, but as the town *Kiapiche* lies in the mountains, he has probably gone from Bamian only into the next valley towards

* M. Court conjectures "sur les marches d'Alexandre," p. 28. elle (la rivière de Kabool) entre alors dans la vallée de Djelalabad, où elle recoit d'abord les eaux du Sourkhab, qui vient du Canton de Peiver et ensuite celles de Khonar (Kameh) qui a sa source dans le Kaferistan.

† Foe K. p. 89. ‡ Hiuan, Thsang, p. 379.

the east. A pass leads in an easterly direction from Bamian into the valley of Gurbend; Baber has described this defile;* I refer for this to the corrected map of Burnes; 200 *lis* northwards from the capital are the great snowy mountains, consequently the Hindookush, so that the capital cannot be Cabul, as Mr. Landresse conjectures. It was then (632 A. D.) an independent empire, to which some neighbouring states were subjected; we know this fact already of *Nakie*. There was the old kingdom of the Gandharas, not perhaps of the Indians, but of the Scythians, who took afterwards possession of the Indian Gandhara. Ptolemy places the town *Kapisa* two and a half degrees northwards from *Kabura*, and Pliny,† (VI. 25. 23) when numbering the countries westward from the Indus says, "a proximis Indo gentibus montana Capissene habuit Capissam urbem, quam diruit Cyrus."

It is undoubtedly the *Kiapiche* of the Chinese.

This district is indeed not assigned to India, but most of the places, the names of which are cited by Hiuan Thsang, can be derived from Sanscrit roots. The mountain *Pilosolo*, (steady as an elephant,) is *Pîlusâra;* but this very term for "elephant" is considered as introduced into Sanscrit from another language.‡ I only mention this in order to recall the affinity observable here to an Indian language.

When Hiuan Thsang leaving India‡ on his pilgrimage had passed the snowy mountains, he descended for three journeys, and reached *Anthalofo*. This is *Anderab* in the Balkh. On the southern side, the furthest state is *Foelichisatangna*(sthâna), where a Turkish family reigned in the capital *Houphina*. Baber made his first march to Cabul from the north through the Panghir or Kip-chak pass. He says, "On arriving at the top of the pass, Upiân or Hupiân, I saw for the first time the star Soheil.§" This statement determines *Houphina*.

Below Houphina the empire *Thsaokiutho* was situated, attached in Hiuan Thsang's time to *Kiapiche;* it was therefore in the valley of the Panjhir river. Here also he makes mention of

* Denkwuerdigk, p. 363.
† De pentap. Ind. p. 84.
‡ p. 395. § p. 262.

Stoopas, which are attributed to the Indian king Azôka. The language and characters of this country were, however, not Indian.

The empire *Falanou*, extending to the south, the situation of which most probably is on the river Baran, still belonged at that period to the kingdom *Kiapiche*. This river is often mentioned by Mr. Masson, and still more often by Sultan Baber, and it is strange enough, neither of them distinctly say what river is meant by it. According to Baber, the Alingâr disembogues into the Baran, (p. 276) and in travelling from Cabul to Laughan on crossing the Baran,§ two distinct plains are met with between the foot of the mountains of Gurbend, and the river Baran. Baber goes down along the Baran to collect the revenues of Nijrow. Hence Baran must be the name for the united Gurbend and Panjhir rivers downwards to Lamghan. The statement of *Falanou* lying below *Thsaokiutho*, leads to the same conclusion, and it is a much more certain one than the distances, incorrectly stated regarding this immediate region, enable us to arrive at; but I cannot enter here upon an examination of them. It must be the Kohdâman, perhaps the Verena of the Vendidad. Beghram probably was, in *Falanou*, separated, as it appears from Cabul. *Falanou*, though a province of *Kiapiche*, is still assigned to India, however little similarity the language is said to have had to Indian idioms. It seems to have been here, that the distinctive separation of the spoken languages occurred.

In his journey to India Hiuan Thsang, does not describe *Falanou* and *Thsaokiutho*, but he goes from *Kiapiche* to *Lampho*. This seems to intimate, that he travelled a mid-course, between the two above mentioned countries, upon the great road, which, leaving Thsaokiutho to the left and *Falanou* to the right, leads over Beghram to Nijrow, Lamghan and Jelalabad. (Masson As. T. V. p. 2.)

Lampho is 600 *lis* distant, in an easterly direction, from *Kiapiche*, the way goes through difficult defiles, it was on the confines of India, and lies about the Black mountains; they are perhaps the Siahkoh on the river Kohdâman. (Masson I. 1. p. 2)

Lampho certainly cannot be any thing other than Lamghan,

§ pp. 276. 294. 326.

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the *Lambagae* of Ptolemy, and *Lampaka* of the Indians. In Lamghan there exists an old monument, which the Mahommedans pretend to be the tomb* of Lamech, which Hiuan Thsang has perhaps visited.

The aboriginal inhabitants of Lamghan still use an Indian dialect, and it is indeed a very remarkable fact, that the national contrasts of these people may be so distinctly traced throughout various periods. Ptolemy and Hiuan Thsang entirely agree as to this point, and we have besides the language in corroboration. Hiuan Thsang did not meet with an Indian language, or Indian characters in the valleys beyond the Kohdâman; within the Kohdâman itself, there was a certain similarity with the Indian dialects. On the southern bank of the Cabul river, *Nakoloho* is the extreme boundary of India.

I hope, that I have thus illustrated, though very briefly, the Chinese description of those districts; there remains yet another province, which the Buddhist pilgrims, whose reports are available to us, have not visited, to complete this sketch, and it must be still touched upon. This is *Kipin;* which Fahian mentions, without having advanced so far himself;† it is entirely passed over by Hiuan Thsang. It often occurs in the Chinese annals, from soon after the year 142 B. C. down to 758 A. D.;‡ it was then united with Udjana. In the beginning of the sixth century it waged war with Gandhara on a boundary question, (Foe K. p. 354) and must therefore have possessed those districts which were adjacent on the west to Gandhara. As the Chinese annals make mention of relations between *Kipin* and the Chinese court, but not of any with *Kiapiche,* we might be disposed to presume, that *Kipin* was the diplomatic expression, used to indicate the complete empire *Kiapiche.* But the statements point to another situation. *Kipin* was 700 *lis* to the southward from Bamian, and not eastward as was *Kiapiche,* and 400 *lis* eastwards from *Sieiju* with its capital *Husina,* which must be Ghuznee. These accounts lead one indeed to the neighbourhood of Cabul, which is not mentioned in the reports of the

* Baber, p. 276. Hence he derives the name.

† p. 22.

‡ The reports are collected by Ritter VII. 682.

pilgrims. Here Remusat's assertion, that Kipin is the country about the Kophen, seems to be confirmed. It is the tract about the sources of the river rising to the west of Cabul. It accords with this opinion (to maintain) that Kipin was distinguished as a state independent of *Kiapiche* and *Fulanou*, and is made mention of as a principality which bordered upon Gandhara, and at one time also possessed Udjana. It is likewise in accordance with the above, to distinguish *Kaofu*, by which term Cabul seems to be meant, from Kipin. The one fact is evident, that the word *Kipin* was used in a more extended and more limited sense at different periods. The Chinese accounts most forcibly support what has been already theoretically inferred from the geographical character of the Cabul districts, that they easily split into a number of petty principalities, subjected to constant alteration as regarded their extent and their boundaries.

§ 12.

The Alphabetical Characters.

We will first inquire as to the letters (used in these countries), and this inquiry will be made rather with reference to their historical than their paleographic relations, as these latter cannot be explained in all their bearings (consequences), without our having obtained the perfect alphabet.

First, as to their nature. The letters are partly independent, i. e. such as occupy their own places in the line, and partly dependent, such as the vowel signs; the former are either consonants, or diphthongs, or vowels commencing a syllable.

Let me first put together the consonants, as we have discovered them.

Gutturals: ..... 𐨐. k; 𐨑. kh; 𐨒. h.
Palatals: ..... 𐨔 (j)
Dentals: ..... 𐨟. t. ..... 𐨡 d; 𐨢, dh.
Labials: ..... 𐨨. p. 𐨩. f. (doubtful.)
Semivowels: ..... 𐨪, j. 𐨫. r. 𐨬. l; 𐨭. v.
Sibilants: ..... 𐨯. z; 𐨰. sh. 𐨱. s.
Nasals: ..... 𐨤. m. 𐨣, ṇ, n.
Finally, an uncertain sign 𐨵.

This table shows still some deficiencies; we still want a G, which I do not venture to adopt from a doubtful word of the inscriptions on the topes; we may also look for a K (𐤊) and a B, perhaps also the softer sibilants. This conjecture is founded upon the observation, that the characters still undecyphered, are as many as there are letters deficient; and under this idea, the supposition that the language may not have possessed convertible, and intermediate consonants, is nullified.

The diphthong 𐤅, ô, is always written within the line; the same must also be supposed as to the analagous 𐤉 ê, though this is not yet determined with certainty.

The vowels 𐤀, a, and 𐤅, u, appear to be ascertained, but 𐤉, i, is not so certain. If the remark, that in the alphabet the different quantities of the vowels are not expressed, be well founded, we have not to look for further additions to the vowels; but we must still wait the decision, as to whether the sign, supposed to denote the shortened u, can be proved correct, or whether 𐤅 was ordinarily substituted for u. Upon this supposition, however, would arise a contradiction as well in the mode of representing the vowels between i, and u, as also in the manner of expressing the Greek υ. The vowels i, and originally, as is most probable, u, also, when following consonants, are denoted by peculiar marks, annexed to the consonants; the i by a small perpendicular line drawn through the consonant from above; u, if our supposition be correct, by a small angular projection to the right.

A, is considered as inherent in the consonant, and a consonant which presents no other sign of a vowel, must ordinarily have the vowel a, whether long or short. A, being excluded from a final consonant, is not denoted by any sign. There seems to exist a diacritical point for distinguishing similar characters; a small cross line annexed below is a mere calligraphic ornament.

Character of the Alphabet.

The rule for reading the Alphabet is the Semitic, and this fact is the more remarkable, as the Indian characters of the immediate neighbourhood, as well as those occurring upon Greek coins, coeval with the most ancient coins on which the Cabulian characters occur, have never assumed this direction

in all the varieties which the Indian alphabet has gone through within India and out of its confines.

The arrow-headed inscriptions too have the same direction with the Indian, and though at least one variety of them does not express the a, following consonants, yet it has not, as the characters of the coins have, signs of the shortened vowels i and u.

On the other hand, there is evidently in the legends a certain approximation to the Indian system of vowel-writing, not especially by the fact, that i and perhaps also u, even when short, are not denoted by marks on the consonants, nor by the other similarity, that they are not represented, even when long (with u however this is mere conjecture) by the corresponding quiescent semivowels j and v; for the first may occur in Semitic alphabets, the latter may be omitted in them, especially if they be applied to a foreign language; but this approximation of the vowel system is made remarkable by the peculiarity, that a is not treated in the same manner with i, but is considered inherent as in Indian languages. Whenever any Semitic language expresses the short vowels by smaller signs, it does so with a as well as with i and u: whenever it denotes the long vowels by quiescent consonants, similar to vowels, it applies for this purpose א as well as י and ו. But all Indian alphabets represent, as our coins do, A, I, U, by their own signs only as initials to syllables, but never A, when following a consonant, and the other vowels only by abbreviations.

The diphthongs, at least ô, do not follow the Indian system, according to which ते तै *te, tai,* तो, *to,* as well as तु *tu,* are written by abbreviated signs, they do not follow a Semitic system; but the diphthongs are placed in the line with the other letters, and ô has in the writing no reference to u; ê has it not to ee; while instances of the uncontracted diphthongs *âi* and *âu* are wanting. The instance of Eukratides can decide nothing as to the system of orthography peculiar to the language.

As the diphthongs are written in this language, so were all the vowels in Zend; but that language distinguishes between long and short vowels, though the former are but amplifications of the latter.

Now supposing that the characters on the coins were a Semitic alphabet applied to an Indo-Iranian dialect, the shapes of the consonants, and the initial vowels, might be considered as of Semitic origin, the principle for the medial vowels would have been borrowed from the Indian system of orthography, while an independent principle was invented for the diphthongs; and if the orthography of the Zendic language were likewise of Semitic origin, the principle adopted on the legends for only ô, (and ê) would have been extended in this language to all vowels.

This conjecture embraces the postulate, that at the period when the characters on the coins were introduced, the Indian alphabet had already completed the system upon which its peculiar mode of representing the vowels is founded.

This supposition may, I think, be proved correct.

Let us first of all dismiss any consideration of the Semitic origin of both alphabets, and look to the reference they have one to another. If in the one, the system of vowels be of Indian origin, and in the other original (and peculiar to the language,) as above supposed, there can be no point of comparison. But with regard to the diphthong ô, it is worth remarking, that 𐎱, ô, has the form 𐎲 on later coins, but slightly differing from 𐎳, and hence it would appear as if the Zendic alphabet had borrowed this ô from the alphabet on the coins. This, however, does not hold good with ê.

By comparing the consonants, we find resemblances perhaps only between r and w, (not v, of the Zend alphabet), and n, in which, however, the similarity is very obvious, though we in fact are comparing two extreme points only, *viz.* the characters on the coins in their most ancient form, and the Zendic character of wholly modern manuscripts. With other letters we only require a common medium of comparison to ascertain their relation, as for instance with m, dh, and others.

I do not propose to carry this comparison further, which to afford satisfactory evidence, would require us to obtain in the first instance the characters of the coins in their latest shapes; and would also necessitate us to point out in the Zendic alphabet, what characters were subjected to a change of shape, to which the nasals are especially liable. Lastly, it would not be sufficient to

confine our comparison to these two alphabets; all other alphabets must be similarly considered, which in a geographical and historical point of view are included in the same circle as these, viz. the Pehlvi characters of the books of the Parsees, so intimately connected with the Zendic character, as well as the various characters of the Sassanian monuments. All of them are closely connected, first, in a geographical point of view, as they are the native tongues in the countries west of the Indus, and east of the Euphrates, viz., in Iran, probably so called; and secondly, in an historical point of view, as they came into use in the period intervening between Alexander the Great and the invasion of the Mahomedans.

Without at all deciding on the time when the Zendic works were first composed, it is certainly evident, that the characters of the coins, appearing before the dominion of the Sassanians, were the most ancient of the alphabets of Central Iran.

The characters on the coins are therefore of special importance with regard to their relations to Semitic alphabets, before proposed as a mere conjecture, and if we do consider that it was during the dominion of the Seleucides, and their successors, in use in Bactria and Parthia, we must look for the model upon which they are formed, in the capitals of the Seleucidian power, if their origin from the west be admitted. The comparison must consequently specially include all that may be most likely to afford us an idea of the Syrian alphabet, as it was in use under the Seleucides, such as the inscriptions of Palmyra, though the most ancient of them is nearly a century and a half later than the characters on the coins.

These conjectures pretend to no more authority than is implied in them as mere suggestions, and they must not hinder us from determining more exactly the alphabet on the coins in a geographical and chronological point of view.

Its geographical limits are connected with the extent of the Greco-Bactrian and Indo-Scythian power southward from the Indian Caucasus. None of the Greek kings who reigned in Bactria only has made use of this alphabet on his coins, and even of those who have adopted them, *Eukratides* perhaps alone possessed territories in Bactria, as well as southward from the Caucasus.

To this we must add the following: the Kanerkis, who, while passing towards India, must have lingered longer in Bactria than other Scythians, because they appropriated to themselves in preference Bactro-Persian gods, have, like the Greek purely Bactrian kings, never adopted this alphabet.

This being so, we cannot help supposing, that the characters of the coins were not indigenous to Bactria, that is to say, that they existed to the south only, and not to the north of the Caucasus.*

They are discovered to the east in topes, near Jelalabad, and between the Indus and Hydaspes in Manikyâla, but further eastward than this, they have not been met with. We also do not know yet whether they extend to Kandahar, in a more westerly direction. To the north of the Cabul river those characters are met with in Kapurdigarhi, in the ancient Peukelaotis. As. Trans. v. Pl. XXVIII.

As the matter therefore rests at present, we may assert, that these characters were geographically limited to the country about the Cabul river, and we will term the characters on the coins THE CABULIAN ALPHABET.

Menandros, or Eukratides, is the first who made use of the alphabet. That we may not pretend to fix the time more exactly than the facts admit, we shall assign their first occurrence to the years 180—170 (B. C.) It existed in use, as has been already noticed, till within the Sassanian era, and is therefore coeval with the character found further west on the monuments and coins of the Sassanides.

The latest occurrence of these characters is perhaps found in the report of Hiuan Thsang, when he says, that in *Thsaokiutho* other characters than the Indian were in use; now there, in the country to which our alphabet was indigenous, about the Panjhir, a tributary of the Cabul, it appears hardly possible to allude to any other characters than to these.

But it was, on the other hand, also cotemporary with the Indian alphabet, which appears as early upon the coins of Agathokles and Pantaleon, and proves entirely different, both by its opposite mode of writing and by the shape of its characters.

* A short inscription, a word from Bamian, which Mr. Masson had read according to their alphabet, is quite uncertain, As. T. v. 188.

This Indian alphabet occurs immediately before this date on the columns of Azôka (260—219. B. C.)* and continues under the Indian kings of the Maurja dynasty.† As now the empire of Azôka extended to the Indian Caucasus (I shall hereafter recur to this) and as it would appear preposterous that he should have introduced an alphabet foreign to him upon the *stupas* which he is said to have built there,‡ as on the contrary the Cabulian characters on the coins disappear in western India, together with the dominion of the foreigners, the following conclusions seem still to result. First, the Cabulian characters on the coins occur in the Punjab, not because a native alphabet was unknown there, but in consequence of the foreign dominion, which transplanted thither from Cabul, carried on its coins along with it, to the east, its peculiar characters. Secondly, it is doubtful, whether the dominion of the foreigners descending from the Caucasus, found in western Cabulistan, this alphabet alone in use, or employed in common with an Indian one. To us it appears probable, from the foregoing remarks, that these foreigners did not import the alphabet with them from Bactria. At the very place where the intercourse of trade brought into contact the east and the west, India and Iran, it was most easily possible that an alphabet, introduced from the west, such as we must admit the alphabet on the coins on our previous investigation to be, may have been in use in common with Indian letters, unless we be disposed to attribute to the Paropamisades the invention of an alphabet of their own. Whether there were indeed an Indian alphabet there, we shall not question; the coins of Agathokles and Pantaleon, however, prove, that an Indian alphabet, if not in western Cabulistan, prevailed at least more to the eastward; had this not been thecase, why should they have used Indian characters? But these characters disappear with those kings, and retreat proportionately with the extension of the dominion of Menandros to the eastward.

I do not here extend these remarks, as the era and the abode of Agathokles and Pantaleon are still uncertain; I shall only add, that I can place them neither with Mr. Raoul-Rochette in

* Zeitschrift fuer die Kunde des Morgenlander, As. Trans. VI. 791.

† As. Trans. VI. 678. ‡ Foe K. p. 395.

Bactria at the head of all those princes, nor with Mr. K. O Mueller remove them to India Proper.

But the following fact will prove, how correct it is to consider the characters on the coins as foreign to India. Upon the ancient Buddhist coins, discovered* in the ruins of the town Behat on the banks of the Jumna, there occurs the title 𐨪𐨁𐨪𐨟𐨿𐨪𐨁𐨗𐨿𐨗 *Mahârâjâ*, in Cabulian characters, and on the reverse the same words in the old Indian characters of the Agathokles coins, and the Azôka columns.† By this fact it is quite evident, that the Cabulian alphabet on the coins was not in use in India Proper, and this at the period when the most ancient form of the Devanagari, which we as yet know, was still prevailing. Those Buddhist kings whom we otherwise do not know, must have employed the Cabulian characters only for the use of their subjects on the banks of the Indus.

It does not follow from the foregoing remarks, that the characters are not more ancient than the coins upon which they occur. If no coins were previously struck there, the characters could not indeed be used for numismatic purposes, but they would be in the transactions of other business. When Pânini (IV. I. 49) informs us, that by the affix *ani* to the word *Javana*, the writing peculiar to this nation *Javanani* यवनानां लिपिः यवनानी is represented, he perhaps points at the Cabulian alphabet. According to Indian tradition, Pânini is placed immediately before Chandragupta, (therefore during the reign of Alexander the Great); it is more certain, however, that his native country was the ancient Gandhara, where he would be certainly enabled to become familiar with the characters of the *Javanas* of that country.

I have taken it for granted in the course of the preceding remarks, that the Indians were already possessed of an alphabet of their own, at the period when the Greek kings first extended their dominion to the south of the Caucasus; some of my inferences are mainly founded upon this view.

* As. Trans. III. 227.

† I owe this important fact to communications Mr. Prinsep made me by letter. The proper names are not yet read, as far as I know, upon the coins of this kind, with duplicate legends; those that are read, are only in old Indian characters and Indian. As. Trans. VI. 464. As those others

But now I perceive, that an erudite person whose views must be of great weight with all those that have occupied themselves with his writings, draws from the newest inquiries into Indian coins, the conclusion, that the Indian alphabet is derived from the Grecian.

Mr. Prinsep in decyphering these Indian characters, written in a peculiar manner on the coins of Saurashtra, asserted, that the more ancient the Nagari, the more similar become the characters to the Grecian ones. Upon this he had grounded the conclusion,* that the most ancient Greek characters are but the Indian turned upside down.

Mr. Mueller, who did not of course require proof of the invalidity of this view, takes the converse of the assertion.† "If," says he, "the relation of the ancient Nagari to the Greek alphabet is closer than can be explained by the common derivation of both from Phœnician language, we are forced into the conclusion, that the Greeks introduced this alphabet to the Indians, and that in consequence, the heaven-born alphabet of the Brahmins is not older than Alexander."

Now this is no casual remark, such as sometimes occurs in a journal, and which we may put aside without notice, but it is, if not a view deliberately considered, still an opinion positively pronounced and hopefully cherished. He says (p. 249,) "We must, however, confess that our hopes as to the historical connexion between Indian and Grecian civilization, go far beyond this fact," (that the Indians have borrowed their shapes of coins from the Indo-Scythians) "and extend over the whole history of art and letters."

It is therefore a favourite opinion of this celebrated scholar, the correctness or incorrectness of which must be of vital importance in Indian antiquities. For if the Indians had no alpha-

are ancient, I presume, that on these very coins, monuments of the dynasty of the Buddhist Khanishka will be brought to light; for he must have reigned a short time before or after the commencement of our era; he ruled Gandhara, Kazmira, and the country Keenaputi 500 lis to the eastward from Vipâzâ, (Foe K. p. 381). This lies in the nearest neighbourhood of Behat, and the use of the two-fold characters for the same language is exactly suited to these countries.

* As. Trans. VI. p. 390. † Goett. Gel. Anz. at other places, p. 252.

bet before Alexander, all the writings that we have hitherto considered the subject matter of as genuine sources for the knowledge of India from the most ancient days, were penned after Alexander's time, or more correctly speaking, after the establishment of the dominion of the Bactrian kings in Cabul and on the Indus, as no sound critic can assign such an influence as consequent on Alexander's momentary sojourn in India.

Bayer had discovered from some Indian words, communicated to him, that a striking similarity obtained between the Greek and Indian numerals; hence he concluded, that the Indians had borrowed these words from the Greeks. The affinity was ingeniously discovered, while the inference not too bold, as he at the same time admitted, that the Indians possessed other and more ancient native numerals; none, however, will probably in our days earnestly undertake to refute Bayer's opinion; but in his time he could hardly draw any other conclusion from the reports at his disposal.

Mr. Mueller's conclusion, however, appears to me much bolder, and whatever species of criticism he may meet with from others, I for my part shall refute him in good earnest.

Supposing, there exists in very deed a similarity between the Greek and the Indian characters on the Saurashtra coins, as Mr. Prinsep has maintained; granting also, that they were imitated after Parthian and Indo-Scythian models, it will be asked, what inference can be hence derived? Certainly only this, that the characters on those coins are of Greek origin. Mr. Mueller* places a date to these coins, subsequent to the first century of our era; the age of the Indian alphabet cannot therefore be traced with certainty prior to this period.

Whether this similarity do exist, or not, is here wholly beside the question; I think it fallacious, but I shall here drop the subject.

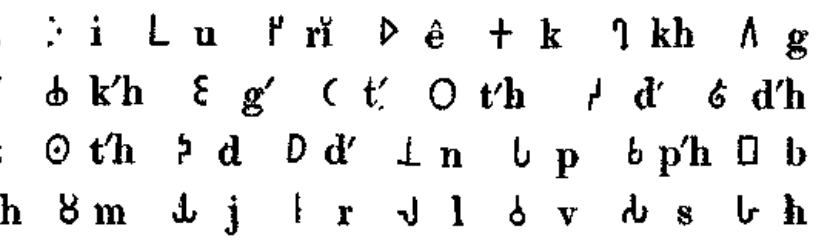
Mr. Mueller will have it for granted, that the older the Indian characters are, according to his conjecture, the closer must be their similarity with the Greek.

Now he assigns himself the coins of Agathokles and Pantaleon to the year 200—160 B. C. Their coins, having exactly the same alphabet as employed but a short time before on Indian monu-

* p. 248.

ments, was undoubtedly the form, then adopted, of Brahminical Debnagari. This character has been now decyphered with full authenticity by Mr. Prinsep, as is the most ancient from the Indian characters hitherto discovered.

I shall here copy this alphabet, (and ask), whether the hopes, above alluded to, of tracing the sources of the Indian alphabet to the Greek, are likely to be much favoured by this discovery? I must strongly doubt it.



It may be added, that this alphabet had already the junctions of consonants, and the representative marks for shortened vowels, such as we find them to this day in the Indian orthography.

To prove the desired derivation of the Indian alphabet from the Greek, it will be necessary to point out, as existing between the era of Alexander the Great, and the grandson of Chandragupta, Azôka, a form of Indian characters, marking the progress of transition from the Greek alphabet to the Indian, above exhibited. Till this has been effected, we may be allowed to keep in store (as reserve artillery), the remaining arguments in favour of the originality of the Indian alphabet, which are to be discovered in the grammatical system, in the history of the language, in the substance of the inscriptions, and, lastly, in the reports of Megasthenes and Nearchos.

The time has been, when every invention of the human mind must have passed from the East into Greece; but the philologists of classic antiquity would like to establish the converse of this view on every subject. The hope of advancing science is most laudable, but most fallacious, if cherished for a favourite system, since it impedes the judgment in forming clear and impartial conclusions. How otherwise could a man of so clear a mind, as is Mr. Mueller, fail to perceive, that he clung to a predilection, while neglecting the most important facts?

It seems to me, I confess, a pleasant accident, that this latest effort at Indian conquest, made by Greek philology, may be refuted by the mere agency of a petty monument of Grecian art.

§ 13.

The Language.

That the language of the legends in the Cabulian character belongs to the widely extended family of the Arian languages, is so evident from the foregoing disquisition, as to render it unnecessary to dilate on the subject; a few words only on the latest coins of the Kadphises dynasty, constitute the only exception to this fact.

The language on the coins also remains at all periods unaltered; in the word *tâdârô* alone is an alteration affected to *dhâdhârô*, giving evidence of a later variety in pronunciation.

I do not include in this assertion the language of the Kanerki-coins; they refer to another dialect, on the position of which, as to local use, a conjecture can only be formed hereafter. From the discussions, as to the country to which this alphabet was indigenous, the natural inference ensues, that the language, expressed in these letters, may be assigned to the same country; all peculiarities hitherto discovered, as to the system of sounds in the language, tend to the same conclusion.

The language is not Zend, for this does not absorb the consonants; the Zend has *puthra*, not *putta*, and retains even on the Kanerki-coins, *athro*, *mithro*, *ardethro*; the language of the coins, on the contrary, reads, *Minadhô*, *Eikatidô*; Zend again retains *n* before t, but not the language on the coins; Zend does not exclusively express its nominative in the termination ô, and it alters an Indian H into Z, while the language of the coins has *mahatô*. Zend has no L, while with our language it is a favourite letter, as for instance, *prati* becomes *pati*, and even *pali*. A Zendic, or more correctly speaking, an Iranian affinity, appears only in the substitution of k (i. e., q or kv) for *sp* identical with *sv*. This fact, and the correspondence with the old Persian in omitting the nasal before dentals, are the only peculiarities which refer to Iran.

Other facts have been noticed, with regard to the language,

as common to the Indian dialects of Prâcrit, viz. the absorption of consonants, the alteration of hard into soft roots, and the l for t. The word *Dharma* has a decided relation to India, being all a doctrinal term, which cannot be declared as such with reference to Iran; again, *râjan* for *king*, and *gaja* for *victory*; *tâdârô* too is also Indian,—though we will not deny its also belonging to Zend. These indications lead us to a country, immediately bordering upon India, and the language of which, though not entirely Indian, and rather forming a transitional dialect in some respects between the Indian and Iranian languages, still did not very materially differ from an Indian dialect; in saying which, I allude to the language in daily use with the common people, and not to Sanscrit, which was then already, in all probability, the language of the learned castes, and of the great. The existence of the dialects of Prâcrit, as in common use with the people, is ascertained by their occurrence on the Buddhist monuments of this time; the Prâcrit, or what eventually is the same, the Pali, could not have been raised by the Buddhists to the dignity of a religious language, unless it had existed aforetime among the people. Now as about the period of the first of the Greco-Indian kings, Prâcrit was used on monuments in India itself, at least by the Buddhists, there is no occasion for wonder, if we meet with a popular dialect in Cabulistan, especially on coins: the Sanscrit would have only been in use there under a Brahminical influence.

The country of the language on the coins may therefore with certainty, I think, be looked for westerly from the Indus, and to the south of the Indian Caucasus; but it is very difficult to define its limit more exactly; for though we have already proved, that the influence of Indian dialects extends to the westward of the Indus, even to the Cabul river beyond Jelalabad, still it does hence not follow, that to the country west of that, the same language existed. It is true, we found also, that the Paropamisades were represented as being Indians, and a later notice extends the term *Indian* even to Arachosia;* but reports of only a little later date, have limited the influence of the

* Isidor. Charac. with Huds. p. 8.

Indian language to a point beyond Jelalabad. To arrive at a conclusion, would involve the necessity of acquaintance with the more minute peculiarities of those languages in their ancient condition.

Again, the existing relics of the ancient languages in these countries, admit the inference of no deduction. The Deggani language in Langhan, as well as the spoken language of Kaferistan, may still be recognised as remnants of old Indian dialects, but we do not know them so well, as to be able to make use of them here. The language of the remaining ancient races of western Cabulistan, the Kohistan of the present day, is entirely unknown. We can therefore only say generally, that in *one of* those dialects the remnants of the ancient Cabulian language must exist, the oldest traces of which occur on the coins, but without being able to decide ourselves in favour of any particular dialect among them, as being the receptacle of those remains. I indeed know, that some have pretended to recognise the Afghans in eastern Cabul, even as early as Alexander's time; not so Mr. Elphinstone,* who rather proves their immigration into Cabul at a much later period; this conjecture has originated with Professor Wilken, who thinks, he recognises the Afghans in the Assakanes.† If these were indeed Afghans, the Afghan language would have been spoken throughout Cabul, and the language of the coins must be the sources of the Pushtoo. Without observing, that neither ancient authorities nor modern Afghan history, admit or require this supposition, the correct assertion of the learned academician himself, that the Afghans belonged to the Medo-Persic tribe, is at variance with it; the Assakanes inhabited a country, where even in the 7th century A. D., an Indian language was spoken. The language of the Afghans, moreover, shows an evident difference from the language on the coins; as, for instance, it substitutes like Zend, z for the Indian h, *zumy*, winter, for *hima*, and this z is altered in the western Afghan dialect into *gh*, *urighu* (rice) for *urizu*, for *vrihi*.‡

* Account, &c. II, 10. 33. 44. 50. 56. &c.

† Abhandlg. der Berl. Acad. 1818-19 p. 261.

‡ Ὄρυζα has been introduced through Persian into Grecian language.

Though I cannot therefore discover the Afghans on the Indian frontier at so early a period, yet I willingly allow, that the original seats of the Afghans, may have had a situation sufficiently near Cabul. On this supposition, it would by no means be surprising, if their language were not a purely Iranian dialect, but rather like that on the coins, forming the transitional dialect between the Iranian and the Indian, but approaching (in point of locality), the west, with a prevailing affinity to Iranian peculiarities. I dare, however, not indulge myself by pursuing this interesting investigation.

§ 14.

The Kings. Classes of coins, and places of their discovery.

There is much more difficulty in obtaining for the seat of the different empires, established by the coins, and for the series of their kings, even that degree of probability, which we have, I think, succeeded in arriving at for both the language and alphabet.

It will here be necessary, first to have before us the materials to be arranged; I shall accordingly enumerate the names of the kings according to the coins, adding the facts, which hence result, as regard the æra, the succession, or any remarkable circumstance with respect to each of those kings. I have invariably noted the places, where the coins have been discovered, if it appeared to be instrumental in determining the native country of the kings. The classes I have adopted, are founded on the language and alphabet, and their sub-divisions upon the numismatic inquiries of Mr. Raoul-Rochette, and upon the titles of the kings.

Concerning this catalogue, I must premise, that it has been only made with a view to facilitate succeeding investigations, and that it does not pretend to giving a numismatic description.

I. *Coins with merely Greek characters.*

§ 1. *Greek characters, and purely Greek names and titles.*

Euthydemos. Head with diadem; on the reverse Hercules, either standing with the club raised in his left hand, the lion's skin over the arm, and in the right hand a crown, or else a common Hercules, seated, leaning on his left hand, in the right the

club placed on a rock.* The coins presenting Hercules in a standing position, exhibit the youthful head of the king, which indeed differs from the head of Euthydemos, as ordinarily represented, and rather resembles that of Agathokles; hence Mr. Raoul-Rochette's conjecture, that Euthydemos may have succeeded Agathokles, and may at first have retained on his coins the portrait of his predecessor.† The resemblance with that king, however, appears not striking enough, and the connexion between both of them could be only admitted in the reversed succession. Lastly, a coin has been discovered, the reverse of which represents a horse without trapping, and galloping;‡ one legend occurs invariably. ΒΑΣΙΛΕΩΣ ΕΥΘΥΔΗΜΟΥ. Bronze coins with an Apollo, crowned with laurel, and the reverse with the tripod. R. R. II. 60. J. d. S. p. 387.

We may get some single specimens of these coins, which are distinguished for their beauty, from the south of the Caucasus; but they come in course of trade from Balkh; there occur too in Bokhara many coins of Euthedemos, barbarously executed, with an almost illegible legend, which sometime eluded all attempts at reading it.§ These latter are imitations, originating with the Scythians of the north, whom we cannot call Indo-Scythians, as they had not arrived yet in India.

Demetrios, son of Euthydemos, a fact confirmed by the coins.‖ Beardless, diademed head; reverse, helmeted Minerva, standing, with a long tunic, and a shorter one over it, the left hand leaning on the shield; in the right a spear. Another reverse with Hercules standing, either similar to the coins of the father,¶ or crowning himself with his right hand; and the head of the king, elegantly adorned with the trunk and tusks of an elephant. This latter emblem, evidently refers to his Indian conquests. Mr. Raoul-Rochette infers from the similarity of the other type with that on the coins of the Eukratides, that these

* R. R. J. des Sav. p. 328. p. 386. I. p. 7. A. T. IV. pl. XXV. No. 1. V. pl. XLVI. No. 3.

† I. 8.

‡ As. T. V. pl. XLVI. No. 4.

§ R. R. I. 3. II. 12.

‖ R. R. J. des Sav. p. 330. I. p. 3. II. 17.

¶ R. R. I. p. 7. &c. II. p. 16.

coins of Demetrios were struck, while he was unexpelled as yet from Bactria by Eukratides, and infers, that Demetrios had therefore also reigned in Bactria, though but for a short time.* That he laid claims to Bactria, is certain enough. These coins are likewise of superior workmanship, and in most elegant taste. Legend ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ. The coins are rare, and have been partly transmitted to us through India, partly through Bokhara. Their proper place of discovery is perhaps not yet exhausted (discovered?) On this hereafter. Mr. Mionnet (VIII. 473) pretends to infer from these coins the existence of two Demetrii; till this new fact in history is more surely proved, we may be allowed to treat this second Demetrios as "a king of shadows."

Heliokles.—Known only by his coins, and first embodied in the series of Bactrian kings by Mionnet, then by Visconti.† Mionnet asserted, that he was the son of (or of an) Eukratides, while Mr. R. R. thinks him his predecessor.‡ A specimen has been brought from the city of Cabul by Mr. Honigberger,§ Type; Jupiter standing, with the thunderbolt, and the legend ΗΛΙΟΚΛΕΟΥΣ ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ. On account of the epithet (*just,*) Mr. R. R. puts Heliokles in connexion with other kings, who likewise style themselves *just,*‖ as the founder of a separate branch; but Lysias, whom he had in mind, in forming his opinion, is a Spalyrios, and of the other Grecian kings, only one has the same epithet, viz. Archebios, a later discovery, he has indeed as well the Jupiter type, but he in addition calls himself ΝΙΚΗΦΟΡΟΣ, and has a native legend. A copper coin of Heliokles, the first specimen of this kind, has been discovered of late in the Punjab, (As. Trans. Vol. VI. 987,) it is not stated, whether with a native legend or not. I may be hereafter allowed to propose a conjecture on historic grounds concerning his era.

Eukratides. Mr. Raoul-Rochette¶ distributes the coins bearing this name, between two Eukratides, father and son, on the precedent of Bayer, who maintained, that some things

* I. p. 10. As. T. IV. pl. XXV. No. 2.

† R. R. J. des Sav. 1834. p. 329. ‡ R. R. I. p. 34. II. p. 26.

§ R. R. I. 3. ‖ I. p. 26. ¶ T. der Sav. p. 387.

were mentioned of Eukratides, not in correspondence with the victorious king of this name; hence he concluded, the name of his son, successor, and murderer, was the same.* But that the son and parricide did bear the same name, is not conclusively established by authorities (of which hereafter); while Mr. Mueller† objects to this view from the very reason, that, according to the arrangement of M. R. R., this very Eukratides, known to us as a parricide, was called "the Great." There occur indeed two specimens, one of which has also native legends. I here describe the purely Greek one alone, postponing my own view for the historic examination.

Diademed head of the king; reverse, a naked Apollo crowned with laurel, standing with one hand leaning on a bow, in the other an arrow. Legend ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ.‡ This type never has a native legend. On other coins a head of Apollo with a laurel wreath; on the reverse, a horse with the same legend in Greek alone.§

The coins with the Dioscuri on horseback, with the title of "Great King," and which are partly of purely Greek and some with a native legend, are assigned to Eukratides II.

This type of the Dioscuri, however, likewise occurs with the simple Greek legend, ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ,‖ and without the native character, which only appears, when the Greek has the word ΜΕΓΑΛΟΥ. The Dioscuri on horseback have sometimes a helmeted, and sometimes a diademed head of the king; those with the caps of the Dioscuri only a diademed head, with the title either simple, or at length.¶

It is evident, that neither the difference between "king" and "Great King," nor the native legend, affords any criterion for assigning the type of the Dioscuri to the son. There remains the difference in the features of the king, which may be laid to a difference in age. On the native legend we shall remark hereafter.

* p. 95. † p. 205

‡ J. des Sav. p. 386, I. No. 5.

§ R. R. II. 60. ‖ A. T. IV. pl. xxv. No. 6. 7.

¶ A. T. V. pl. xlvi. No. 10. No. 11.

Masson found 107 coins of Eukratides in Beghram, he does not, however, distinguish them according to the types.*

There occur also coins of Agathokles, with a purely Greek legend; but as nobody would adopt the idea of *two* Agathokles, we shall postpone the investigation of this point.

§ 2. *Purely Grecian characters, the kings not Greek, having, however, no barbarian titles.*

The following coins present a singular phenomenon. Mr. Masson discovered at Beghram,† in the space of three years two hundred and fifty-seven specimens of a coin with the legend ΒΑΣΙΛΣΕΥΣ ΒΑΣΙΛΕΩΝ ΣΩΤΗΡΜΕΓΑΣ, but without a proper name. The Greek legend being sometimes corrupted, we observe either ΒΑΣΙΛΕΥ or ΒΑΣΙΛΕΥΩΝ.‡ Bags full of these may be had in Affghanistan, and in the Punjab. The similar coins with a native legend, never have the bust of the nameless king. Mr. Raoul-Rochette describes them in this manner: "Bust of a king, the head encircled by a diadem and a nimbus; with his left hand holding an iron spear; no legend. Reverse, a man on horseback with the Greek legend, above mentioned. The head of the bust helmeted, occurs too as a variety."§

The large number of these coins proves that this king possessed an ample empire, and did not reign for a short time; he must have governed Cabul, and a part of the Punjab. The corrupt Greek suggests an era, more recent than that of many other Indo-Scythian coins. The title σωτὴρ seems to connect him to the Greek Soter family, which may have concluded with Hermaios. This is the remark of Mr. Mueller, and I am only prevented from adopting it, because the Kadaphes coins are apparently still nearer related to one or the other Hermaios, and all the other Soters have likewise native legends. M. Raoul-Rochette‖ accounts for the want of the name by (the supposed existence of) an agreement, with regard to the currency, to the effect, that in order to put the coins into common circulation in neighbouring states, the name of none of the kings of those states was

* A. T. V. p. 547. † A. T. V. p. 547.

‡ R. R. I. p. 26. As. T. IV. 345.

§ R. R. I. No. 17. No. 18. No. 19. As. T. IV. pl. XXIII. No. 26 (Among the Azes' coins.)

‖ II. 38.

used on the coins. The nameless king, however, appears to have been too powerful to acquiesce in such a stipulation. According to Mr. Mueller, his name, on account of its dissonance, could not be well expressed in Greek. People, however, who were not offended at the nominative βασιλευ, or the genitive βασιλευων, would not have hesitated at obtruding a name as barbarian as possible, on the Greek letters, and if the attempt were unsuccessful in Greek, why was not given recourse to native letters?

I cannot explain, why there is no name; but from the use of Greek characters alone, it becomes probable, that the Soter belonged to a certain Scythian horde, which had for some time their abode in a country, where purely Greek, and not native characters, were adopted for the coins. The nameless king, who perhaps first settled his horde in Cabul and about the Indus, perhaps adhered at first to the established custom by not adopting native characters on his coins. At an after period, however, he perhaps used them; if indeed the coins with native legends, which M. Mionnet assigns him, be really his.*

There exist besides, coins of some other Indo-Scythian kings, with regard to which it is doubtful whether they have native or purely Greek legends. They bear the title "King of Kings," and some of them have a horse, others an elephant, and they reigned therefore partly in Bactria, partly in India. As the names are illegible, we shall here only refer to the engravings and descriptions of these coins; for we must at first leave even this undecided, to which of these kings the native legends belong, and whether we have to adopt a separate series of Indo-Scythian kings, who admitted purely Greek letters and titles, whilst the Kanerki dynasty adhered to Greek characters to express barbarian words. If the assertion, that to the north of the Caucasus the characters on the coins were not used, be well founded, we might presume, that those Indo-Scythian kings held fixed dominion in Bactria alone. Now those coins yield no other historical result, than that the Indo-Scythians were divided into

* VIII. p. 505. pl. x. No. 85.

a number of dynasties, and that we are far from knowing the whole series of their names.*

Lastly, we have yet to mention here the king Mayes.

Type a Caduceus; legend ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ. Reverse, the head of an elephant from which a bell hangs, of beautiful Grecian workmanship and with good Greek characters; according to M. R. R., contemporary with Menandros and Apollodotos, as the same head of an elephant occurs on their coins; his conjecture, that the name may be a variety of Apollodotos, has hardly any support whatever.† Mr. Mueller thinks these large copper coins to be the most ancient monuments of the Indo-Scythian dominion in India.‡ The elephant alludes indeed to a campaign against India. Being taken from the collections of the Generals Ventura and Allard, they refer to the Punjab. M. Mionnet ascribes to Mayes, moreover, a native legend, which consists of two signs.—This legend as given by Mr. Prinsep, is scarcely to be taken as letters; M. R. R. has not noted it at all; the pretended legend stands besides between βασιλέως and Μάνου; the name must have been expressed by ΡΑΟ, which does not appear with Mr. Mionnet. How then has this king used a native legend? As respects this king also, I must leave it to numismaticians to make a historical application.

§ 3. *Pure Greek characters; barbarian names and words.*

Kodes. Small silver coins. A head, the hair wreathed with fillets, and descending to the neck; it would appear, that the face is different (on different specimens); one has mustachoes, but all of them have suffered much. Legend, ΚΩΔΟΥ, complete on but one coin.§ Reverse, a figure standing, the right hand lean-

* As. Trans. v. pl. xxxv. No. 4, iv. pl. xxi. No. 12. No. 13. No. 14. Then iv. pl. xxi. No. 7 and 8, lastly iv. pl. xxi. No. 11. Compare Mionnet viii. p. 504. No. 135, No. 136, No. 141, No. 142. I shall not undertake to read the native legends, represented x. No. 88.

† II. p. 49. The coins R. R. II. No. 18. As. Trans. iv. pl. xxv. No. 4. New varieties of them are discovered of late in the Punjab. As. Trans. vi. 987. ‡ 228.

§ As. Trans. v. pl. xlvi. No. 16, No. 17. No. 18. iv. pl. xxv. No 11. No. 12. No. 13. R. R. J. d. S. 1834. No. 8. No. 9. p. 389.

ing on the hip, in the left a spear, indistinct head dress, flames behind the shoulders. Legend according to Mr. Prinsep's conjecture: (A)PΔHΘPOY MAKAP(OΣ). The Greek letters terminate in points; upon No. 13 there is perhaps the name of another god. A second variety, has the anterior half of a horse. They come from Cabul and western India; but likewise through Bokhara to Russia.

The horse refers to Bactria, as do the purely Greek characters and the god of fire, with whom the names of gods on the Kanerki coins are connected.

Kodes is perhaps the very same king, who went southwards over the Caucasus, and founded an empire on the banks of the Indus and of the Cabul, for the Kanerkis.

Kanerki coins. I shall not repeat the remarks above made on the legends, the words PAO NANO PAO and KOPANO, and the names of gods. Kanerki is represented in a standing position, with a long Usbek coat, pointed Tartar cap, the right hand leaning on a spear (and a bow over the back, T. A. V. XXXVI b. 9.) with the left making an offering over an altar. The figures of gods on the reverse are already described. In the note I shall mention the coin,* some from the topes in Manikyala, Jellalabad, and from Cabul and the Punjab, from Benares, and likewise from the Ganges.†

Ooerki. Bust of the king, adorned with a tiara, holding with the hand a plant which he contemplates.‡ The same places of discovery. No coins having Greek words, or the god of the sun.

A man mounted on an elephant; his name illegible, only PAO NANO PAO-KOPANO.§

On the coins of another king of this series, a female figure

* T. As. III. pl. XII. pl. XXV. IV. pl. LI. V. pl. XXXVI. Trans. R. As. Soc. I. pl. XII. R. R. J. des Sav. 1834. and I. pl. II. and the authorities. I. 57.

† As. Trans. III. p. 443. IV. p. 631. R. R. II. p. 4.

‡ As. Trans. III. pl. XXI. No. 2. XXII. No. 24. IV. pl. XXXVIII. No. 9. No. 7. V. pl. XXXVI. No. 3. No. 7. R. R. II. p. 58. J. des Sav. 1834. No. 10. As. Trans. III, p. 445.

§ A. T. III. pl. LI. No. 10. V. pl. XLVI. No. 13. No. 12. IV. pl. LI. No. 10. A. T. V. p. 722.

with a glory, seated on a couch; one foot on the ground, the other, on the couch.* Here also the name is illegible.

There is another type of a figure sitting in a cross-legged position; some other varieties may probably be still discovered.

The most ancient specimens of these coins have a tolerably good style, and distinct letters; both become gradually worse, and lastly deteriorate into a chaos; then follow the Indian imitations. The places of discovery prove, that the Kanerki dynasty possessed, at least at the commencement of their rule, a large territorial dominion; from the traces of the Shiva worship, we may conclude that the Kanerkis added to the worship of Mithra, introduced by them from Bactria, the worship of Shiva, as it occurred with the Kadaphises.† Hence they must (partly at least) have taken possession of the dominions of the Kadaphises. We may consider their dialect either as a more modern one, or as a provincial variety. It is evident from the coins, that they out-lasted the Kadaphises, who never sunk into the same barbarism.

It will remain doubtful, whether the Kanerkis maintained themselves till within the Sassanian period, unless it be decided, that the topes must be ascribed indisputably to the Kanerkis. They certainly reigned in India before the time of the Sassanians. Lastly, the opinion, that the Kanerkis were Buddhists, or in other words, that we have to recognise Kanishka in Kanerki,

* A. T. III. pl. XXII. No. 29. IV. pl. 21. No. 9.

† The worship of Shiva appears to have prevailed in Cabul in the first centuries of our era, and beside it, pure Buddhism was widely diffused. Hiuan Thsang at least mentions a temple of Bhîmâ, viz. of Pârvati or Doorga, in Gandhâra, p. 379. But Megasthenes appears to have already corrected this mistake. For if he reported, according to Arrian and Strabo, that the Indians of the plains worshipped Hercules (whereby Mathura is made mention of) and that the mountaineers, on the other hand, adored Dionysos, these latter must be probably understood to be the inhabitants of the mountainous districts about the Cabul, and below Kazmira, in the Punjab, while the plains are those of the inner country, and on the borders of the Jumna and Ganges. It is true, it has been of late doubted, whether Hercules be Krishna, but I hardly think, one acquainted with these subjects, will doubt it any more, than that Dionysos cannot be but Shiva.

must continue to be improbable, until Kanerki be also discovered on Buddhistic monuments.

II. *Greek, and Indian characters.*

The coins of Agathokles and Pantaleon alone as yet compose this class.

Agathokles. Diademed head of the king; reverse, a standing Jupiter, with the left hand leaning on his sceptre, holding on the right a small three headed Artemis, bearing a torch. Legend, ΒΑΣΙΛΕΩΣ ΑΓΑΘΟΚΛΕΟΥΣ.* Tetradrachma of very superior workmanship.

M. Raoul-Rochette has proved, that the figure on the legend is the Persian Artemis Hecate, the Ζαρῆτις or Ζάρα, whose worship Artaxerxes Mnemon was endeavouring to propagate within his empire, and Bactria is especially mentioned† with regard to this. Male head, with Dionysos' crown of grapes. Reverse, a panther walking, holding with his fore claw a grape. The same legend as above mentioned. Tetradrachma.‡

Square copper coins with the same legend. On the obverse, a female Bacchanal, flourishing the thyrsus, and the legend above represented, in old Indian characters. Eleven specimens have been discovered, all from Cabul.§

M. Raoul-Rochette has tried by a vast display of learning to establish his conjecture, that Agathokles was the first king of Bactria, he having been the Eparch of Persia under Antiochus the second, who is called Pherekles by others, and whose pederasty is said to have excited the Parthian revolt.‖ Not to mention other objections, this conjecture falls to nothing owing to the Indian letters, which Agathokles cannot have used for his Bactrian subjects. But previously to Eathydemos, no Bactrian king made conquests southwards from the Caucasus. As copper coins are less likely to go by trade into other countries than gold and silver (coins,) the place of discovery of the

* R. R. J. des Sav. 1834. p. 332. No. 2. II. No. I. p. 12 A. T. IV. pl. XXV. No. 3. from the Punjaub.)

† (J. des S. at other places, p. 340. II. p. 13.)

‡ (J. des S. No. I. by the way of St. Petersburg.)

§ R. R. II No. I. II. p. II. A. T. V. pl. XXXV. No. 9.

‖ (J. d. S. p. 336.)

Agathokles' coins points out an empire on the borders of the Cabul river.

The worship of the Persian Artemis must not appear surprising on the coin of a king, who, though not reigning in Bactria, yet started from that country. The Bacchanal symbols certainly allude to an Indian expedition; but it is surprising, that Agathokles and Pantaleon, almost coeval with him, should alone parade these symbols of Dionysos. Going a step further, we dare assert, that Agathokles reigned immediately over those districts, where the traces of the expedition of Dionysos were fancied to be extant; viz. over the country of the Nisaeans. But it is not India Proper, but Cabul, that is celebrated for her grapes; in Cabul too, are the copper coins of Agathokles discovered, and instead of the nation of the Nisaeans (a somewhat fabulous race) of Alexander's period, we observe in the late report of Ptolemy, the well defined town of Nagara, surnamed Dionysopolis, which denomination can have been only given by a Greek king, probably by Agathokles. His use of Indian, and not Cabulian characters, leads to the conclusion, that his reign succeeded a previous use of Indian characters; viz. it argues a former Indian domination in these districts. I therefore think he is the same, who first brought Grecian arms down the Cabul river. According to Mr. Mueller,* he reigned about the Upper Ganges. In this case he must before Menandros have advanced beyond the Hyphasis to the Jumna, and even further, which is at variance with Strabo's explicit statement. His coins, exhibiting a much better style in art than those of Menandros, he must have reigned before this king. Strabo would likewise mention him as the first, who crossed the Hyphasis.

Pantaleon. Square copper coins, exactly like those of Agathokles, before described as from Cabul and the Punjab.† Legend, ΒΑΣΙΛΕΩΣ ΠΑΝΤΑΛΕΟΝΤ(ΟΣ) and the other legend in Indian characters, above mentioned. From the small number of coins it becomes probable, that Pantaleon did reign but for a short time; the dominion, founded by Agathokles, must on the whole have been of short duration. We shall hereafter recur to this subject.

* p. 213. † As. Trans. III. p. 168. V. p. 552.

III. *Greek and Cabulian characters.*

§ 1.—*Greek Kings.*

Eukratides. I assign to this place the coins bearing the title "Great King," as they certainly mark an epoch in the life of the one Eukratides, even if they should not belong to a second of the same name. The Cabulian legend never occurs unaccompanied by the word ΜΕΓΑΛΟΥ in the Greek legend; hence it follows, that the title, "Great King" was first adopted in the south of the Caucasus.

Helmeted head of the king. Reverse, the Dioscuri on horseback, with spears couched, holding branches of palms above the shoulders. Legend: ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ.*

The same with Greek legend on the obverse; on the reverse, *Mahârâjô Eikatidô.*†

The same reverse with ΒΑΣΙΛΕΩΣ ΕΥΚΡΑΤΙΔΟΥ, and on the reverse with the helmeted‡ or diademed § head of the king; no Cabulian legend.

Diademed head of the king; legend, ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ ΕΥΚΡΑΤΙΔΟΥ. Reverse, caps of the Dioscuri with palms, of the native legend only *Maharajô.*‖

According to Mr. Prinsep's statement,¶ the complete legend is 𐨨𐨪𐨿𐨨𐨪𐨿𐨨𐨪𐨿𐨨𐨪𐨿𐨨 𐨨𐨪𐨿𐨨 *mahârâjô rajâ râjô Eikatidô.* This legend however appears only to occur upon one coin, on which the helmeted head of the king on the reverse has a female figure, seated, with the turret-like crown of the Cybele.¶¶ The word is *rajâ râjô;* it can hardly have occurred upon the other coins. As it cannot be, however, adopted by mere chance, we must ascribe the complete title to that as yet single coin alone. It is the only instance in which a Greek king of Bactria styles himself *king of kings,* and this only in Cabulian language, as it were, not venturing to obtrude this ostentatious title on his Greek subjects. Likewise Eukratides alone calls himself in

* J. des Sav. No. 5. As. Trans. IV. pl. xxv. No. 5.

† As. Trans. IV. pl. xxv. No. 8. 9. 10. R. R. I. No. 7.

‡ As. Trans. IV. pl. xxv. No. 7.

§ As. Trans. IV. pl. xxv. No. 6. R. R. I No. 6. II. No. 3.

‖ As. Trans. V. pl. XLVI. No. 11.

¶ As. Trans. IV. p. 338.

¶¶ According to the description. As. T. III. p. 164.

Greek letters *great king*, while the others adopt the simple βασιλεύς as equivalent to *Mahárájó*. It therefore almost appears, as if Eukratides first used Cabulian legends, without properly attending to the comparative value of the different terms; since the same etymological value of two words in different languages is in many cases not the same in the real acceptation of the words.

Mithridates VI. of Parthia, had adopted the title *king of kings*; and Eukratides seems to have imitated his contemporary in assuming this title.* Coins of Eukratides are frequently met with in Cabul.†

On account of the dispute of numismaticians, we shall postpone the decision, whether we must adopt two or only one Eukratides, to the examination of the historic authorities.

Antimachos. Head of the king with the Macedonian hat, (*kausia*), and Neptune with a palm on the reverse. Epithet of the king, Θεὸς. A coin, published by Köhler, obtained through Russia, which refers to a victory at sea.‡ Victory dressed and winged, in the right hand a palm. Legend, ΑΝΤΙΜΑΧΟΥ ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ. Reverse, the king on horseback galloping. Cabulian legend, 𐨨𐨪𐨫𐨁 𐨪𐨁𐨫𐨪𐨁 𐨨𐨪𐨫𐨪𐨯, *Mahárájó gajavató Atimakhó.*§ From Cabul. M. R. R. has proved, that these coins are an imitation of those of the Seleucidian Antiochos IV., who likewise styled himself Θεὸς. Antiochos reigned 176—164. B. C., and Antimachos therefore about the same time. The correspondence of these coins with the tetradrachmas of Heliocles will also give evidence, that Antimachos was his contemporary. On this supposition, it becomes difficult to place both of them before Eukratides. The Cabulian legend points to an empire to the south of the Caucasus, but perhaps not in Cabul itself, as the Antimachos' coins are scanty in Beghram. I beg to direct the attention to two points: the equestrian coins form a separa-

* Visconti. Iconogr. Grecque. III. 76.

† As. Trans. III. 164. v. 547.

‡ R. R. J. des Sav. p. 329. II. p. 18.

§ R. R. II. No. 4, p. 17. A. T. IV. pl. XXI. No. 3. at the same place No. 4 has 5 for 𐨫, therefore perhaps a 𐨫, or k for kh.

ted class, and Antimachos has strengthened his dominion by a victory at sea.

Philoxenos. Bust of the king; the bow of the diadem projecting from under the helmet. Legend, ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΦΙΛΟΞΕΝΟΥ. Reverse, king on horseback galloping. Cabulian legend: *Mahárájó apaliható pilashinó (*or *pilushino).**

Demeter Karpoforos; in the right hand a crown; in the left a cornucopia; the foregoing Greek legend; reverse, the bull with the hump. The same Cabulian legend.†

The same obverse, with the reverse of a victory with crown and palm (only described).

M. Raoul-Rochette takes him for a king, who reigned in the neighbourhood of the Scythians, and valiantly fought against them on horseback. The Cabulian legend prevents us from acceding to this. Philoxenos wears a *kausia,* as Eukratides and Antimachos do, and as a horseman, moreover, is analagous with them. The bull with the hump is correctly interpreted as referring to a particular country, but to what country, will be evident from the coins of Azes. In Beghram no coins of Philoxenos have been discovered by Mr. Masson.

Archelios. Diademed head of the king. Legend, ΒΑΣΙΛΕΩΣ (ΔΙΚΑ)ΙΟΥ ΝΙΚΗΦΟΡΟΥ ΑΡΧΕΛΙΟΥ. Reverse, Jupiter, seated on a throne, the sceptre in the left hand, the thunderbolt in the right, and the legend, 𐨪𐨁𐨯𐨪𐨿 𐨪𐨁𐨗𐨁𐨪𐨿 𐨨𐨆𐨪𐨫𐨿, *maharajó, dhamikó, gajavató Achilijó.* From Beghram.

I have given him this place, because the epithet "victorious" puts him into comparison with Antimachos; Antialkides, however, bears the same epithet, and has besides, the Jupiter.

Antialkides. Uncovered head of the king, with the branch of a palm, crossing the field. Legend, ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ. Reverse, the Dioscuri caps with palms, as upon the coins of Eukratides. Legend, *maharajó gajavató Atialikadó.*‡

* R. R. II. No. V. A. T. No. IV. pl. xxi. No. 1.

† R. R. II. No VI. As. T. IV. pl. xxi. No. 2.

‡ R. R. II. No. 7. I. No. 15. A. T. IV. pl. xxvi. No. 9. 10. 11.

M. Raoul-Rochette assigns to him with certainty a place immediately following Eukratides, in a neighbouring country, which we cannot, however, look for with him to the North of the Caucasus.* On account of the title Nikephoros, he has some analogy with Antimachos.

There exists another coin of this monarch with the head of the king, with the *kausia* and the same legend; the reverse represents Jupiter, seated on a throne, with a sceptre and a winged victory in his right hand. The same native legend.† All these coins are from Cabul or the neighbouring districts.‡

Lysias. Uncovered head of the king, the palm crossing the field as with Antialkides, the bust partly given. Legend, ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΛΥΣΙΟΥ. Reverse, elephant.§ Legend, *Mahárájó apalihaló lisijó* (lisajó.)

M. R. R. pronounces him with full confidence successor of Antialkides;‖ here likewise follow the titles *Aniketos* and *Nikephoros,* one after the other, as above mentioned, with Philoxenos and Antimachos. Coins of Lysias and of Antialkides are found in Cabul; ¶ the elephant alludes to an Indian expedition. The dynasty to which Antialkides and Lysias belonged, seems therefore in fact to have had their site in Cabul, and their empire was probably established upon the ruins of one more extensive.

I here insert a coin, for which I cannot discover a proper place.

Amyntas. Bust of the king with indistinct head-dress; legend, ΒΑΣΙΛΕΩΣ ΝΙΚΑΤΟΡΟΣ ΑΜΥΝΤΟΥ. Reverse, helmeted Minerva, with shield and lance, extending her right hand. Legend, *Maharajó, gajavaló amitó.* From the Punjab.¶¶

We now come to a longer series, bearing the title "deliverer."

Menandros. Helmeted head of the king with the upper part of the bust, and the chlamys; legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΜΕΝΑΝΔΡΟΥ. Reverse, Minerva πρόμαχος. R. R. I. No. 8. Legend, *Maharajó tádáró Minadhó.*

* II. p. 23. † As. Trans. V. pl. xxxv. No. 2. ‡ R. R. II. p. 22.
§ R. R. II. No. 18. As. Trans. IV. pl. xxvi. No. 12. ‖ II. p. 24.
¶ R. R. II. p. 24. ¶¶ A. T. V. pl. xlvi. No. 1.

Helmeted head of the king, with the same Greek legend. Reverse, a clothed victory, with wings, palm, and crown. The same Cabulian legend.*

Head of an elephant, with the same Greek legend. Reverse, a club, with the Cabulian legend.†

Uncovered head of the king, with the upper part of the bust dressed in the chlamys; the right hand raised to throw a lance. The same Greek legend. Reverse, Thessalian Minerva, protecting herself with the shield; in the right hand the thunderbolt raised. The same Cabulian legend.‡

Head of the king in a helmet, and the Greek legend. Reverse, Ægis, and Cabulian legend.§

The same obverse; upon the reverse an owl, and the Cabulian legend.‖

Obverse, wheel with eight spokes, and the Greek legend. Reverse, branch of a palm, and the Cabulian legend.

Uncovered head of the king, with the Greek legend; reverse head of an animal, which Mr. Prinsep, with probable correctness describes as an elephant, though Mr. Masson has drawn a dolphin. The same Cabulian legend.¶ Lastly, head of a boar, with the Greek legend. Reverse, branch of a palm surrounded by the native legend.**

Coins of Menandros have been frequently discovered in Beghram by Mr. Masson, so many even as one hundred and fifty-three specimens up to the year 1835; they are likewise met with in Agra, on the borders of the Jumna, and near Mathura.†† These were probably the extreme points of his empire. We have shown, that his reign extended to the Jumna, and the elephant on his coins corroborates this extent of his dominion. Whether he also ruled in Bactria, we shall hereafter inquire into; the native legends rather disprove than confirm this opinion.

* R. R. I. No. 9. 10. As. Trans. IV. pl. xxvi. No. 3.

† R. R. I. No. II. p. 17. As. Trans. IV. pl. xxvi. No. 2.

‡ R. R. II. No. 12. As. Trans. IV. pl. xxvi. No. 1.

§ As. Trans. V. pl. xxvi. No. 5. ‖ At the same place, No. 6.

¶ At the same place, No. 8, as the preceding copper coin; according to M. R. R. II. 34. a club. ** At the same place, No. 9.

†† As. Trans v. p. 547. 722. Trans. of the R. A. S. I. 315.

For the historical arrangement of all those kings, it is of vital importance to ascertain the era of Menandros. M. Raoul-Rochette has most plausibly assigned to Menandros a later period than to Eukratides.* The inference he further draws from this position of Menandros, that he first took possession of the Indian empire of Demetrios, and afterwards of the Bactrian dominion of Eukratides, is hardly to be reconciled with the authorities of written history; we do not understand, in fact, how Menandros could dethrone Demetrios, since Eukratides had done it; we shall therefore hereafter lay hold of the only fact which is proved with probability by numismatic inquiry, viz. that Menandros seems to have reigned subsequently to Eukratides.

Apollodotos. Apollo standing, leaning his left hand on the bow, holding a lance with his right. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ. Reverse, a tripod: legend, *Maharajô Apaladatô tadarô.* †

Uncovered head of the king, with diadem and upper part of the bust, and the chlamys. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣΚΑΙ ΦΙΛΟΠΑΤΟΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ. Reverse, Thessalian Minerva, as upon the coins of Menandros, covering herself with the Ægis instead of the shield. The same native legend, without *φιλοπάτωρ*, *tádárô* alone preceding the name.‡ Elephant in motion. Legend as before mentioned: reverse, the humped bull, and the same native legend.§

The coins are discovered at the same places with those of Menandros, and M. Raoul-Rochette deserves the merit of having proved, with the utmost probability, that Apollodotus was the son of Menandros.

Diomedes. The Dioscuri, standing, and with lances. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΟΜΗΔΟΥ. Reverse, the humped bull, and the native legend, which he probably thus restored:

* II. p. 32. 33.

† R. R. I. No. 12. As. Trans. IV. pl. xxvi. No. 6. No. 7. No. 8.

‡ R. R. II. No. 13. As. Trans. IV. pl. xxvi. No. 4.

§ R. R. II. No. 14. As. Trans. IV. pl. xxvi. No. 5. See. R. R. II. p. 18.

𐨪𐨫𐨁𐨪𐨫𐨐𐨫𐨁𐨪𐨫𐨐𐨫𐨁 (𐨪𐨫𐨐𐨫)𐨪𐨫𐨐𐨫 (υ) *Maharajô tâdârô Dijamidô.** Only one specimen from Beghram. The humped bull, and the epithet, prove the right of position as here given.

Agathokleia. Helmeted head, which must be the head of a woman, with the upper part of the bust, and of the dress. Legend, ΒΑΣΙΛΙΣΣΑΣ ΘΕΟΠΡΟΠΟ(Υ) ΑΓΑΘΟΚΛΕΙΑΣ. Reverse, Hercules seated, in the right hand the club, placed on his knee, with the left supporting himself, as on the coins of Euthydemos. Legend, *Maharajô tâdârô Mikonidô.*†

Howsoever we may read the name, it is certain, that we have here a new king, whose epithet assigns him a place among the successors of Menandros. The place of discovery is not mentioned; the coin is, however, found in India. If any relation is to be admitted between Euthydemos and Agathokles, we may perhaps recognise another analogy in the fact, that Agathokleia exhibits a type of the Euthydemos' coins. She is certainly, however, the wife of the new king, mentioned only in this place; perhaps a heroine of masculine character, like Eurydike (the niece of Alexander, and grand-daughter of Philip), whom her husband honored by associating her with himself upon his coins. May not the unusual epithet perhaps allude to this fact? ‡

Hermaios. Uncovered diademed head of the king. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΕΡΜΑΙΟΥ. Reverse, Olympian Jupiter, seated on his throne. Legend, *mahârâjô tâdârô, hirmajô.*§

Uncovered head of the king, with diadem, the upper part of the bust, and of the chlamys. Reverse, Olympian Jupiter seated, and extending his right hand. Legend as above described.‖

Head of the king, probably with diadem, the same Greek legend; the reverse has a horse; and the native legend as above described.¶

* As. Trans. V. pl. xxv. No. 3. † As. Trans. V. pl. xlvi. No. 2.

‡ I find θεότροπος to be authorized by one passage alone in Heliodor. Carm. v. 250, as an epithet to ξῆλος. Only one Greek king of these provinces, Antimachos, has styled himself God.

§ R. R. I. No. 13 (where the initial letter in tadaro is misdrawn). As. Trans. IV. pl. xxiv. No. 1.

‖ R. R. I. No. 14. p. 21. As. Trans. IV. pl. xxiv. No. 2. No. 3. No. 4.

¶ As. Trans. V. pl. xxxv. No. 11.

In Beghram so great a number of the coins of Hermaios have been discovered, that no doubt can be entertained of the seat of his empire. Mr. Masson thought he might adopt, according to the difference of the types, three different kings of this name, an opinion, rejected by M. Raoul-Rochette.* There is no doubt the coins, above described, with the bust, and the name of Hermaios on the obverse, and with Hercules, standing and leaning on the club and the curious native legends on the reverse,† do not belong to the Greek Hermaios himself, as in the Greek legend the name of Kadaphes is substituted for that of Hermaios, without any alteration of the type. Those only upon which ZAΘOY occurs, have perhaps a title in another type; all the coins, however, that are published, are very indistinct.‡

As these coins prove that a Kadaphes took possession of the empire of Hermaios, so other facts concur in giving evidence, that Hermaios concluded the series of the Soter dynasty. His coins represent a rapid decline of art, and are partly excelled by those of the more ancient Indo-Scythians. M. R. R. has also here the merit of having proved, that the type of the Olympian Jupiter is an imitation of the coins of Alexander II. of Syria,§ and that Hermaios must have accordingly reigned after the years 129—23. B. C.

With Kadaphes, above mentioned, Kadphises is connected by name; but as previously to him, other Indo-Scythians must have ruled in the country on the borders of the Cabul, we shall first insert them here.

Barbarian Kings.

Azes. King on horseback, in his right hand a lance. Legend, BAΣIΛEΩΣ BAΣIΛEΩN MEГAΛOY AZOY. Reverse, Minerva, with the Ægis on her arm, in the left hand the lance, the right raised. Legend, *mahárájó rajárájó maható Ajó.*‖ Or reverse, Minerva clothed, holding shield and spear in a moving

* As. Trans. III. p. 162. V. p. 547. R. R. II. p. 37.

† R. R. II. p. 36.

‡ As. Trans. V. pl. XXXV. No. 13. new coins of this class have been lately discovered, VI. 987.

§ I. p. 19. ‖ R. R. II. No. 15. As. Trans. IV. pl. XXIII. No. 18.

position.* Or, reverse with a male figure in a tight tunic; tiara with ribbands hanging down, and bearing on the right hand a winged Victory. On both of them the same native legend, which is but seldom completely preserved.†

Or, the same obverse; reverse, a male figure, standing, with the tiara, and long stole, holding in the right hand an idol.‡ As far as traceable, the same native legend. Or, reverse with an Abundantia,§ standing and holding a cornucopia. Native legend, *maharajó, maható, dhamikó rajádirajó Ajó.* This complete legend is on the reverse not discernible.‖ Obverse, Ceres, seated on a throne, in the left hand a cornucopia, the right raised; reverse, Hercules standing, and leaning on his club.¶ As far as legible, the simple native legend.

The following coins are of importance, as they mark the provinces, which were under Azes' dominion.

Obverse, the king on horseback. Reverse, the humped bull; on others, a Bactrian camel.** Obverse, elephant; reverse, the humped bull.††

Obverse, humped bull; reverse, lion without mane,‡‡ or Bactrian camel.§§ The Greek legend always the same, and the simple native legend ("without *dhamiko*") on some, *rajarajó*; on others, *rájádirájó*.

Obverse, Neptune clad in the pallium, standing, with the left hand leaning on the trident, the right foot placed on the figure of a man, as if swimming. Reverse, a female figure in a long robe.‖‖ M. R. has proved, that these symbols allude to

* R. R. II. p. 40. As. Trans. iii. pl. xi. 45. No. pl. xxiii. No. 15.

† R. R. II. No. 19. As. Trans. at the same place xxiii. No. 17, No. 19.

‡ R. R. II. No. 16. As. Trans. iv. pl. xxiii. No. 24. perhaps also No. 20. No. 21.

§ So in original. Goddess of Plenty.

‖ R. R. II. p. 43. As. Trans. IV. pl. xxiii. No. 22. The legend v. p. 549.

¶ R. R. II. p. 45. As. Trans. iv. pl. xxii. No. 10. No. 11.

** R. R. II. p. 43. As. Trans. IV. pl. XXII. No. 9.

†† R. R. II. p. 44. As. Trans. IV. pl. XXII. No. 4, 5.

‡‡ At the same place No. 1, 2, 3.

§§ No. 6, 7, 8.

‖‖ R. R. II. No. 17. As. Trans. IV. pl. XXIII. No. 14.

the Indus river, and to India conquered. Legends, as above described.

As now by these coins Azes lays claim to having conquered the Indus, so the four animals evidently point out the extent of his dominion. The Bactrian camel requires no interpretation, nor the maneless lion, which undoubtedly alludes to an Indian district, and though in our time the lion is only met with in Guzerat,* they must in Azes' time not have been confined to that province. I would rather presume, that by the adoption of the lion, the Sinha, the subduing of the lions among Indian men, viz. the Narasinha, Rajaputra was to be represented, therefore the subjugation of the warlike tribes in the modern Rajpootana, which moreover lies beyond† Guzerat. The Indus subjected, refers certainly to the districts towards its mouth, to Pattalene, which on the west is bounded by Guzerat. As now, the elephant likewise points to Indian provinces, a question arises as to what particular province this refers. It must of course allude to that part of India, which must have been likewise under Azes' dominion, viz, to the country to the north of Rajpootana, the Punjab; yet I confess, I know not why the elephant, which might obviously be used as an emblem for the whole of India, should be made to refer to this part of India alone. A glance

* Mr. Lassen is not aware, of how valuable an argument he has deprived himself in not having ascertained the existence of the lion in our days in Hurriana, where they were a few years ago plentiful; they are now more rare, being driven into the desert by sportsmen, and the gradual settlement of the country. Lions have been shot within the last fifteen years on the banks of the Chumbul, not more than fifty miles from Dholepore.

† I have already observed, that the lion even in our days is known to exist at no great distance from the Indus. It is perhaps worthy of remark in this place, that ample evidence is extant as to the great changes which must have taken place in the localities of wild animals in India, on the testimony of Baber, who mentions killing the rhinoceros on the banks of the Sind and Behreh. "There are numbers in the jungles of Pershawur and Hashhagar," according to Baber, (A. D. 1526), whereas in our own days that animal is not found to frequent any part of upper India above the Pillibheet forests in Rohilkhund; under these circumstances, it is hard to fix a location for the lion in the days of Azes.

at the map must give evidence, that Azes could not allude to any other country.*

It will be proved hereafter, that the Greek kings also, who have chosen the emblem of the elephant for their coins, must have especially referred to the Punjab.

If then the elephant and the lion allude to India, and if Azes also possessed Bactria, he cannot have typified by the humped bull any other country than that on the Cabul. This interpretation is also very well adapted to the other instances in which this symbol occurs; moreover, the Chinese mention the very same humped bull as an animal they for the first time met with in Kipin ;† the names of Cabura (*gopura*, town of cows,) Kophen, and Koas, are perhaps allied to the name of the animal; on this point, however, the native orthography of these names alone can decide.

Azes, moreover, proclaims himself the possessor of so many provinces, upon those coins, where, besides the ordinary reverse of the king on horseback, the reverse exhibits a Victory,‡ having in the left hand a palm, in the right an indistinct effigy, probably bearing a trident. The native legend is *mahárájé rájarájé mahaté Ajilisé*. Of this hereafter.

We first mention the coins on which he is seen seated cross-legged, a sword across the knee, while the reverse has a four-armed male figure.§ I think, it certainly represents the Indian god Shiva. He had therefore adopted the Indian worship, as did after him Kadphises, and in some degree the Kanerkis. Azes was either also called *Azilises*, or this was the name of his son and successor. This fact is proved not only by the coins, already mentioned, but also by the following:

King on horseback, with lance depressed, and the Greek legend, ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΙΛΙΣΟΥ.

* We have an excellent dissertation by Mr. Ritter, on the extreme boundary within which the lion is found in India, Erdkunde VI. p. 709, to which I willingly refer.

† Ritter, Erdkunde, VII. 684.

‡ R. R. I. No. 16.

§ As. Trans. IV. pl. XXII. No. 12, 13. R. R. II. p. 46.

Reverse, Victory with a palm in her left hand; in the right a trident; native legend, *Mahárájó rájárájó maható, Ajilisó.**

The same obverse, with the reverse of the humped bull, and with the same legends.†

Azilises therefore claims Cabul and the country on the Indus to the sea, and if he were another king than Azes, as I think he was, he must have been his successor, on account of the exact correspondence in their coins.

It is, however, of far greater importance, to determine the period of those kings.

The coins of Azes are so closely connected with Greek types, that he must undoubtedly be a proximate successor of the Greek kings and their dominion.‡ Kadphises and the Kanerkis are at a greater distance. Kadaphes alone pretends to have conquered the empire of Hermaios; and yet, this Kadaphes must have lived, according to the coins, at a later period than Azes. But if then Hermaios reigned about the year 120 B. C., Kadaphes must be of almost the same period; Azes would be, on this supposition, an earlier successor to the other Grecian thrones; he preceded Kadaphes therefore, and must be considered as a cotemporary of Hermaios. We shall hereafter state, to what conclusion the examination of the historic accounts must lead us. As to the matter in hand, M. Raoul-Rochette maintains, that the Minerva type of Azes was imitated after that of Vonones; for as the titles and the monagrams on the coins of both kings correspond with each other, Azes must be taken for the successor of Vonones.§

If I be allowed to object to the opinion of so solid as cholar, I venture the following remarks:—

First, the connexion between both of them being ascertained, why does it follow, that Vonones preceded Azes? Certainly neither from the execution of the coins, nor from the historic accounts, would he do so. The Indo-Scythians decidedly reigned

* R. R. II. No. 20. As. Trans. IV. pl. XXIII. No. 27.

† At the same place, No. 28.

‡ R. R. II. p. 47, p. 41.

§ R. R. II. p. 30, 41.

on the Indus, previously to Vonones, even if he were the first of this name. Secondly, how can M. Raoul-Rochette reconcile the facts, that Azes was the immediate successor of the Greeks, and was still preceded by Vonones, obviously of Parthian origin. The monograms decide nothing as to the succession. Parthian kings, even Arsakes VI, had, a long time previously to Vonones, the title of "great king of kings." The epithet "just," assumed alike by Azes and Vonones (this escaped the notice of M. R. R.) also occurs much earlier in Parthian history, even in the time of Arsakes VII.* Why must Azes have borrowed these titles from Vonones? As Archelios among Greek kings already styled himself "just," why cannot Azes have adopted this title from him? Lastly, the Minerva type, upon which the whole argument is based, already occurs with Amyntas; why should it not have descended thence to Azes?

The Vonones under consideration, can hardly be the first of this name, and if M. Raoul-Rochette be right, we must assign Azes to a still later period. I think, however, I have proved, that we shall proceed with more certainty in determining Azes' place by historical accounts, independent of any connexion whatever with Vonones.

It is probable, that such an extensive empire as that of Azes, was not at once overthrown; thus we observe, besides those of Azilises, coins, apparently belonging to successors (of his dynasty); the emblems of the various provinces, however, viz. camel, humped bull, lion, and elephant, do not recur; hence we may conclude, that the successors were not powerful enough to maintain the whole empire.

Some of the coins above (see As. T. 1840, p. 645.) mentioned, perhaps, belong to this class; we would still add the following:

An equestrian coin with ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ; reverse, king holding a spear, with a Kaftan,† and *mahárájá*. Azes never has this dress himself; a name is not traceable.

Another coin of a horseman, with illegible Greek legend, and the monogram of the Kadphises' coins. Reverse, two male

* Visconti. Iconogr. III. 76, 80.

† As. Trans. IV. pl. XXIII. No. 25.

figures crown the king, who stands between them, and leans on a club. On the native legend are only the initial letters of *Mahárájó* discernible, and of the name, 𐨨——𐨪𐨁; the three middle letters should be, according to Mr. Prinsep 𐨪𐨫𐨁; according to the coin, however, this is hardly clear.*

There is a third equestrian coin, on which a figure of indistinct shape delivers to the horseman a diadem. Greek legend effaced. On the reverse, according to Mr. Prinsep, a Caduceus; the name indistinguishable; we can only read *Mahárájó*.†

Of the following king, we know but the name of his brother; and even with this clue, his era has not been ascertained. It is Spaliryos, likewise represented as a horseman. The reverse seems to have been much disfigured; the well known type of Hercules seated. The legends are above described.‡

On account of the similarity of the name, we place after him Spalirisos, with Tartarian Kaftan, and a palm over his left shoulder. The reverse is apparently a disfigured form of Jupiter,§ seated, as occurring on the coins of Hermaios. This king appears to have reigned in Laghman, and perhaps also in some neighbouring districts.

As these last mentioned sovereigns still preserve the relics of Grecian art, so also Vonones, who belongs to this class as being a horseman.

The king on horseback, with depressed lance. Legend, ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΟΝΩΝΟΥ. Reverse, Jupiter, clad in the pallium, leaning on the sceptre, in the right hand the thunderbolt.‖ On thereverse, a Victory without wings, in the left hand a palm, in the right something indistinguish-

* As. Trans. V. pl. XXXV. No. 5. from the Punjab. The position of the horseman is quite the same with the Parthian Artaban III.

† As. Trans. V. pl. XXXV. No. 15. pl. XLVI. No. 14. V. XXXV. perhaps belongs too, to this king.

‡ See As. Trans. IV. pl. XXI. No. 9. V. pl. XXXV. No. 6. R. R. II. No. 9. From the Punjab and Beghram. R. R. II. p. 26. As. Trans. V. p. 551.

§ R. R. I. No. 21. As. Trans. V. pl. XXXV. No. 7. IV. pl. XXI. No. 7, six specimens from Manderor in Laghman. As. Trans. V. p. 551.

‖ R. R. II. No. 10.

able.* The same Greek legend; the native one has been already mentioned.

Lastly, Hercules, the lion's skin in the left hand, the club on his arm, crowning himself with the right; reverse, Minerva, νικηφόρος, with a helmet; on her left hand the shield, and holding on her right hand a winged Victory.† According to the native legend, the word ΔΙΚΑΙΟΥ must have occurred here instead of ΜΕΓΑΛΟΥ

I think I have already proved, that the name Vonones cannot have occurred in native characters on the reverse of these coins, but probably the name Volagases; and further, that this Vonones need not have been, according to the coins, a predecessor of Azes. On comparison with other Parthian coins, it is likewise evident, that Vonones, in striking coins for his Cabulian subjects, followed the coinage of Cabul, and not of the Parthians. To trace the period of Vonones from coins, purely Parthian, would therefore be fallacious.

Another fact to determine the era of Vonones offers itself in the following. The initial letter of the Parthian coin, above described, is M. The Roman Victory on this coin, renders it necessary to assign to this king a later period than to Vonones I. who first of the Arsacides adopted this type.‡ This also leads to Meherdates, who was educated in Rome, and the initials of the name are more like ΜΕ than ΜΟ; but this does not decide the question, whether it were Vonones the First or the Second.

As we have now to admit among the sovereigns of Cabul, not Greeks, but Parthians also, who probably reigned after Azes, (on this hereafter), so a dynasty succeeded the great Indo-Scythian, which assumed the Soter-title of the Greeks. As Azes does not bear this title, they are probably not his descendants.

First, a nameless king, a horseman like Azes, with the legend [ΒΑΣΙΛΕΥΣ] ΒΑΣΙΛΕΥΩΝ (*sic*) CΩΤΗ[Ρ] the name is effaced. The reverse *presents* a male figure walking, with the left hand extended; in the right an elevated spear, with a pecu-

* R. R. II. No. 14. of the coin. As. Trans. IV. pl. XXI. No. 15. I do not venture to trace the reverse.

† R. R. II. p. 30. I. No. 20. As. Trans. IV. pl. XXI. No. 10.

‡ Visconti Iconogr. III. 146.

liar head-dress, the left shoulder naked, otherwise clad in a robe after the fashion of the Gods on the Kanerki-coins. Legend, טורס דזרס טלדצס, *mahatô tadharô maharajô*; the name is also here effaced.*

The monogram on this coin is now the very same with that of the nameless Soter-megas, and we must recognise here, if not himself, yet a near successor of his. The Greek characters do not allow us to connect this king, or the nameless Soter, with the Greeks.

This Scythian Soter dynasty, however, prove themselves as of the same period, or as directly succeeding, the Arsacides above-mentioned, by the following coins, namely by those of Yndopherres. Having the same title, the same Greek characters, and, besides, the Victory of the Arsacides, he is allied to them. He is a complete barbarian in comparison with Azes, and if Yndopherres indeed succeeded the Parthians, Azes may claim an earlier era. Yndopherres, however, endeavours to keep the Greek style of the stamp, while the Kadphises, about to be mentioned, has removed every trace of Grecian art, save the characters, on which he also obtrudes words of his language.

Kadphises. The king on a low seat, bearded, in a high Tartar cap in the form of a cylinder, from which flowing ribbands descend, in a Kaftan and Tartar boots, holding a branch in his hand. In the space below, a club. Reverse, Siva in a light dress, the left hand on the bull Nandi, in the right the trident. There occurs the complete native legend above described; the Greek is the short one.†

The king standing in the same dress, the left hand on his hip, holding the right over a small altar, above which, a trident; in the left space a club (or a sceptre) the long Greek legend; the reverse as above described.‡

Bust of the king, in the right hand sceptre or club; above the cap, the moon-formed sickle (of Siva); in the left a small

* As. Trans. IV. pl. XXIII. No. 23.

† R. R. Journal des Sav. No. VIII.

‡ Trans. of the R. A. S. I. No. 10. R. R. I. No. 23. p. 30. As. Trans. III. pl. XXVI. No. 4. No. 5. V. p. 547. From Balkh, from Beghram and Manykyâla.

hammer, short Greek legend. Reverse, Ardhanari, holding in his right hand a long trident, in the left the discus and pasa of Siva; the complete native legend.* The same reverse; the bust facing the right.†

Lastly, the king on a carriage with two horses; over the shoulder the club, in no proportion with the charioteer; the short Greek legend. Reverse, Ardhanari with the native legend.‡

As copper coins of Kadphises are dug out even near Benares,§ he must have reigned from Beghram to a great distance in India Proper. The execution of these coins is indeed still Greek, but whenever the worship of Siva is represented, the types have become purely Indian. This worship first appears, though not frequently, with Azes, is exclusive with Kadphises, and is joined by the Kanerkis with Bactrian gods, who have the same monogram with Kadphises, and are found together with his coins.‖ There is scarcely any doubt, that Kadphises was a near predecessor of the Kanerkis. His relation to Kadaphes is more obscure. It is clear, that Kadphises has some reference to him, save that the former is more ancient, because he is immediately connected with Hermaios. This king (or the last of his name) was limited to Beghram, and this must have been the principal seat of Kadaphes, though his dominions were of further extent. Now it is a singular fact, that according to the Chinese accounts, the ancient (Scythian) empire of Gandhara was situated in Kiapiche (Capissa), and therefore just beyond Beghram, while the native legend expresses the name Kadphises by Kapisa; this is accordingly the name of the country in the form of pronunciation delivered to the Greeks and Chinese, which name, however, appears to be an absorption from Kadphisa. If the name however be a geographical determination, a new enigma is given, and Uhavima must be understood in this case

* R. R. I. No. 22. From Cabul in a tope. R. R. I. 28. II. 4. 56. J. des Sav. p. 390.

† As. Trans. IV. pl. XXXVIII. 4, No. 2, 3.

‡ The same No. 1.

§ As. Trans. p. 631.

‖ As. Trans. IV. 631.

as a proper name. But it is at variance with this supposition, that Kadaphes should bear the same name. Or is this perhaps a title, and the same case with the nameless *Soter-megas*.

It would be also desirable to ascertain in an approximative degree the relation of Kadphises to the Scythian Soter family. Yndopherres, like Kadphises, appears to have reigned in Beghram;* but the former is allied to the Parthians, the latter to the first Azes; the first has ruder coins, though a classic style; the second, types of a better, although of entirely Indian execution, with an assimilation to Azes by the Siva-worship, while his relation to Kadaphes places him nearer Hermaios; he appears therefore more ancient than Yndopherres. The only objection would be, that the latter in this case is thrown between Kadphises and Kanerki. If the equestrian coins allude, as I presume, to a more westerly country than Gandhara, the solution is perhaps given by the conjecture, that Yndopherres and the Soters, closely allied to him, reigned as horsemen in a more westerly direction than Kadphises and Kanerki; they might therefore rather be placed near either of them, than between them; but I willingly abandon this uncertain base of argument.

It will be proper to look out for firmer grounds upon which we may classify the many dynasties, above enumerated.

§ 15.

Greco-Bactrian Kings.

Let us turn now to the examination of the written accounts of the history of the Greeks in Bactria. Bactria continued under the dominion of the Seleucides to the period of Antiochus II. (262—247. B. C.) when Theodotus took advantage of the weak government, and probably of the wars of that monarch with Ptolemy II. to render himself independent. This separation of Bactria from the monarchy of Antiochus happened a short time before the declaration of independence by the Parthians, or previously to 256 B. C. as appears from the fact, that Arsaces,

* According to the number of coins, there discovered. As. Trans. V. p. 547.

the founder of the Parthian empire, had fled from the increasing power of Theodotus.*

We do not know how far the power of Theodotus extended. Sogdiana was perhaps subjected to him, but it is hardly credible that the thousand towns which Justin attributes to him, to show his power, really existed in his dominions. Bayer plausibly conjectures, that these thousand towns were erroneously transferred by Justin from a notice on Eukratides, to the founder of the Bactrian empire.† The passages show only that Theodotus contrived the conquest of Parthia, while the aggrandisement of the Bactrian power is ascribed to Euthydemos.

In opposition to the explicit authority of these authors, M. Raoul-Rochette has endeavoured to establish Agathokles as the founder of the Bactrian empire.‡ It is true, the eparch of Persia under Antiochus II. is called sometimes Agathokles, and sometimes Pherekles; but our Agathokles reigned in a province of India, and previously to Euthydemos the Bactrian dominion did not extend so far southward.

* Prolog. Trog. Pomp. XLI. "In Bactrianis autem rebus, ut a Diudoto rege constitutum imperium est." Just. xli. 4. On Arsaces: "Non magno deinde post tempore Hyrcanorum quoque regnum occupavit, atque ita duarum civitatum imperio præditus, grandem exercitum parat, metu Seleuci et Theodoti, Bactrianorum regis. Sed cito morte Theodoti metu liberatus, cum filio ejus et ipso Theodoto fœdus ac pacem fecit. Strabo xi. c. 2. p. 515 "Νεωτερισθέντων δὲ τῶν ἔξω τοῦ Ταύρου διὰ τὸ πρὸς ἀλλήλους εἶναι τοὺς τῆς Συρίας καὶ τῆς Μηδίας βασιλέας, τοὺς ἔχοντας καὶ ταῦτα, πρῶτον μὲν τὴν Βακτριανὴν ἀπέστησαν οἱ πεπιστευμένοι, καὶ τὴν ἐγγὺς αὐτῆς πᾶσαν οἱ περὶ Εὐθύδημον." § 3. p. 515. on Arsaces, "οἱ δὲ Βακτριανὸν λέγουσιν αὐτόν. φεύγοντα δὲ τὴν αὔξησιν τῶν περὶ Διόδοτον, ἀποστῆσαι τὴν Παρθυαίαν.

But there was no long interval between both insurrections. Justin, xii. 4, fixes the defection of the Parthians as under the consulate of L. Manlius Vulso, and M. Atilius Regulus; "eodum tempore etiam Theodotus, mille urbium Bactrianarum præfectus, defecit, regemque se appellari jussit. Quod exemplum sequuti, totius orientis populi a Macedonibus defecere." But who were they, unless the Parthians?

† p. 47. ‡ J. des Sav. 1834. p. 334.

There have not yet been discovered coins of Theodotus and his son of the same name, and they can only come from Bactria.

Whether another king reigned between Theodotus II. and Euthydemos, is unknown, but not improbable; the one fact is certain, that the latter sovereign dethroned the family of Theodotus, for he alleged this very act in order to obtain the favour of Antiochus III.*

Upon Strabo's authority, above mentioned, Euthydemos took possession of the districts adjacent to Bactria; Parthia cannot be understood by this, he must have meant Aria and Margiana; he had at least collected against Antiochus an army of horsemen on the borders of the Arius,† and had already fought against the northern nomades, he must have, therefore, certainly possessed Sogdiana, and to him probably refers the notice, that the Greek kings of Bactria divided their empire into Satrapies.‡

We owe to the expedition of Antiochus against upper Asia, a clearer insight into the circumstances of those countries at that period. This war, and the negotiations between the Syrian and the Bactrian kings belong to the years 208-5. B. C. From Polybios' account, which is extant, it follows, that the Parthian

* Polyb. Fragm. xi, c. 34. Schw. III. p. 379. γεγονέναι γὰρ οὐκ αὐτὸς ἀποστάτης τοῦ βασιλέως, ἀλλ' ἑτέρων ἀποστάντων, ἐπανελόμενος τοὺς ἐκείνων ἐκγόνους, οὕτω κρατῆσαι τῆς Βακτριανῶν ἀρχῆς

† Polyb. x. 49.

‡ Strabo, xi. 11, 2. οἱ δὲ κατασχόντες αὐτὴν Ἕλληνες, καὶ εἰς σατραπείας διῃρήκασιν· ὧν τήν τε Ἀσπιώνου καὶ τὴν Τουριούαν ἀφήρηντο Εὐκρατίδαν οἱ Παρθυαῖοι. Ἔσχον δὲ καὶ τὴν Σογδιανὴν κ. τ. λ. The two satrapies mentioned, evidently lie toward the northerly Scythian country, the frontier of Sogdiana. The' Ασπασιάκαι (Strabo, xi. Scyth. 8.) to whom Arsaces fled, belonged to the Chorasmians and Attasians, who have likewise the name Αυγάσιοι; perhaps we ought to read Ἀσπάσιοι. Polyb. (x. 48.) calls all Nomades about the Oxus *Aspasiaces*, which is therefore a general term for the nations of horsemen (*Aspa*, horse). Mr. Burnouf undoubtedly explains with propriety Turiana by the word of the Zend Tûirja; it is the Turan of Firdusis; the Turanian satrapy of Bactria, according to Strabo.

empire, at that period, was still limited to Hyrcania and Parthia, and the Scythian nomades to their northerly heaths, though even menacing invasion. Among the conditions of peace occurred likewise the following stipulation,—that Euthydemos was to surrender his elephants; hence we may presume, that although he had made no expedition on the south beyond the Caucasus, yet, he must have entered upon connexions with India. At that time he had not yet a firm footing southward of the mountains, as we find there the king Sophagasenos, who concluded an alliance with Antiochus, delivered over to him some elephants, and agreed to pay him a certain sum of money. The Indian king apparently engaged in this league as a protection from Euthydemos, whose power had already manifested itself in the south of the Caucasus. As it is called a renewed treaty, this Indian king must have belonged to the dynasty of the Palibothrian princes, who had always been in friendly relations to the Seleucides. We can indeed prove hereafter, that from the time of Seleukos Nikator, those Indian kings possessed the country west of the Indus to the Caucasus,* and hence it arises, that the Bactrian kings, down to the time of this peace, had no possessions in the south of the Caucasus, and only when Antiochus entangled himself in disputes with Egypt, and thereby with Rome, were they at liberty to engage in plans for an invasion of India; that is therefore about the year 203 B. C.

Antiochus effected his retreat through Arachosia and Drangiana, and there is no reason to doubt, that both countries were still under the dominion of the Seleucides.†

Demetrios, the son of Euthydemos, then a youth of remarkable beauty, had a principal share in concluding the peace with Antiochus, whose daughter was given him in marriage.

This Demetrios however is afterwards not mentioned as king of Bactria, but of India ("Demetrii regis Indorum"‡)

* De Pentap. Ind. p. 42—45.

† By the notice, that Seleukos had also yielded Arachosia to Kandragupta, we have certainly to understand but the district eastward of the sources of the Helmund and the Lora. ‡ Justin. xli. 6.

fighting with Eukratides for the dominion of Bactria, and eventually conquered and deprived of India by this king. We do not know, whether he originally succeeded his father in Bactria, and was expelled from thence, and limited to his Indian possessions, being eventually deprived of them also, or whether some one embraced the opportunity of his absence from Bactria, while he was perhaps engaged in an expedition against India, after the death of his father, to take possession of the Bactrian throne.* Nor do we know, whether Eukratides or a predecessor of his, expelled the family of Euthydemos from Bactria.

The opinion which most naturally suggests itself is, that Eukratides expelled them; up to this time, however, Menandros has been ordinarily considered as king of Bactria before Eukratides, though some say, Apollodotos, probably the son of Menandros, or, lastly, Heliokles, whom we know only from the coins. The opinions maintained as explanatory of these different successions to the throne of Bactria, must exceedingly differ one from another, on account of our defective information; and were we to examine these opinions, it would be evident, that all of them are more or less artificial and forced, and even dogmatical. But instead of subjecting them to a critical review, it will suffice our purpose to refer (Bayer, p. 85—89. R. R. I. 34. II. 33,) to them, and to attempt arranging the facts in the way in which, from our own comparison of the respective passages, and the new results derived from the coins, we think we must needs consider them.

First; the conjecture of adopting three kings in Bactria between Euthydemos and Eukratides, appears somewhat improbable. Menandros is among them, whose reign cannot have been a short one, since we know that he had made great conquests in India, and gained by his justice the general attachment of his

* M. R. R. infers from the coins, that Demetrios, although for a short time, did also reign in Bactria. This conjecture is not improbable, though the conclusion of R. R. does not appear to me to be founded on a firm basis.

subjects. On this fact we have the authority of Plutarch and Strabo.*

Secondly; the respective passages, more carefully considered, do not render it necessary to consider Menandros as a king of Bactria, but they are rather at variance with this view.

Plutarch makes no mention of Menandros but accidentally; and the great conqueror is so little known to him, that he calls him, "*one Menandros.*" As now even Strabo, though he had before him the book of Apollodoros of Artemita, the very best authority for this history, does not distinguish in a remarkable manner the separated dominions of the Greeks in India, a fact fully established by the evidence of the coins; we cannot be surprised, that Plutarch in later days, confounded the separate Indian empire with the Bactrian one. The expression he uses, does not therefore oblige us to consider Menandros as king of Bactria.

Strabo, when summing up in his passage the greatest extent of power on the whole, any where attained by those Greeks who rendered Bactria independent, mentions Menandros as the sovereign who advanced farthest towards India; but he is not named there as king of Bactria, nor does this follow from a passage conceived in such general terms as this is. If we do not explain this passage as intended to give a general view, but rather limit the facts mentioned to Menandros and Demetrios, they would be considered by Strabo as those that stirred up Bactria against the Seleucides, and who had also possessions in the country of the Scythian nomades; now the first statement would be false, and the second improbable.

Lastly; the following passage, (Prolo. Trog. Pomp. XLI) "*Indicæ* quoque res additae, gestae per Apollodotum et Menandrum, reges eorum. *Bactria* was, it is true, already mentioned, but why should this prevent a suspicion, that in such an extract the expression was too concisely given, and that instead of explaining "eorum" by "*Bactrianorum,*" we should not rather supply "*Indorum*" from "Indicæ?"

* Plutarch de Rep. Ger. p. 821.

Μενάνδρου δέ τινος ἐν Βάκτροις ἐπιεικῶς βασιλεύσαντος, εἶτα ἀποθανόντος ἐπὶ στρατοπέδου κ. τ. λ.

Strabo. XI. p. 516. We shall hereafter examine this passage.

I infer from this discussion, that none of the passages cited necessitate our considering Menandros as a Bactrian king, and still less Apollodotos. It is only certain, that Menandros made great conquests in India; we must therefore have recourse to the coins.

Thirdly; these coins always exhibit Cabulian letters as their symbols, and their places of discovery, moreover, refer to an Indian empire, and we may justly assign Menandros and Apollodotos to the history of the Indo-Grecian kingdoms.*

Now as to Heliokles:—

This king, mentioned by no author, must have his place assigned him on numismatological grounds alone; but different conclusions have been drawn from them by different writers. Visconti, and M. Raoul-Rochette think him earlier than Eukratides; in this case he might be the very same who removed the Euthydemides from the throne, and the epithet, "the just," might allude to his retributive justice towards the family of the usurper Euthydemos. M. Mionnet takes him for the successor, and even for the murderer, of his father Eukratides. In this case he was perhaps the last Greco-Bactrian king. The numismaticians may settle this dispute among them. There is ample room for him, as well before as after Eukratides, if even *two* Eukratides be adopted. †

* See Mr. Mueller, p. 208.

† Visconti. Icon. III. p. 253. R. R. II. p. 20. p. 26. Mionnet VIII. p. 470. M. R. R. concedes (p. 20) that Heliokles was coeval with his Eukratides II.; but supposing now, that there were *two* Eukratides, or say even, there were only one, how can Heliokles, who has no claim whatever to having possessed any empire save Bactria, have been coeval with Eukratides, unless he were his immediate predecessor or successor? The numismatological reason for assigning to Heliokles an earlier era, seems not to be very evident, as M. R. R. does not mention any certain fact. Visconti's inference, drawn from the epithet, is wholly inconclusive. But how can we reconcile, that in vol. II. p. 20, M. R. R. should make Heliokles a contemporary of Eukratides, while in vol. I. p. 33, he is considered the successor of Demetrius, predecessor of Antimachos, and pre-predecessor of Eukratides I? M. Mionnet explained the epithet of Heliokles, by the passage of Justin, n which he prides himself on the murder of his father as of a good deed. If he were indeed the son and successor of Eukratides, this interpretation of

However Demetrius may have been deprived of the Bactrian throne, it is established, that he founded an Indian empire; thence attacking Eukratides in Bactria, he was conquered by this king, who then took possession of India also.*

Let us first settle where we have to look for the empire of Demetrius. Strabo, in the passage where he takes a general view of the conquests of the Greek kings, mentions two of them, Demetrios and Menandros, as the greatest conquerors. These conquests included partly Ariana, by which Strabo means the country of the Paropamisades, Arachosia, and Gedrosia; and partly countries to the north of Sogdiana. The mention of the Serians does not lead us to *China*, as has been objected to that reading, but to the *Issedon Serica* of Ptolemy, on the borders of the Achardus, whether it be Yarkiang or Kaschgar, and where indeed is the improbability of this supposition? This is the construction of the geographer, Dionysios (p. 752,) Καὶ Τόχαροι, Φρούγοι τε, καὶ ἔθνεα βάρβαρα Σηρῶν." These conquests lastly included districts towards India, and this in two directions, in India Proper, beyond the last river reached by Alexander, beyond the Hyphasis to the Jumna, and down the Indus to the sea, comprising the Delta of Pattalene, and further to the east Surastra or Guzerate, extending along the shore.†

the epithet would be most acceptable, were it not wholly preposterous; for M. R. R. says, (II. p. 20.), "Cette idée est si extraordinaire, qu'elle ne comporte pas une discussion serieuse. Jamais en aucun temps et dans aucun pays du monde on n'a bravé l'opinion publique, ni outragé la raison et l'humanité au point de pretendre couvrir un parricide par le titre *Juste*." I however will not venture "tantas componere lites." It affords me extreme pleasure to learn, that the science of Numismatics is the only one which does not submit to force, and pay homage to crime, that it has even necessitated such an abominable monster as the son and murderer of Eukratides to preserve upon his coins, that respect for public opinion, which he elsewhere so boldly violated!

* Justin. XLI, 6. Strabo XI. 1, p. 516.

† Τοσοῦτον δὲ ἴσχυσαν οἱ ἀποστήσαντες Ἕλληνες αὐτὴν (Bactria) διὰ τὴν ἀρετὴν τῆς χώρας, ὥστε τῆς Ἀριανῆς ἐπεκράτουν, καὶ τῶν Ἰνδῶν, ὡς φησιν ὁ Ἀπολλόδωρος ὁ Ἀρταμιτηνός, καὶ πλείω ἔθνη κατεστρέψαντο ἢ Ἀλέξανδρος, καὶ μάλιστα Μέ-

It has not been noticed, what direction the conquests of Demetrius followed; those of Menandros, it is said, were directed against India Proper. But who then conquered Ariana? Who Pattalene? Who the country of the Serians? Strabo makes no distinctions there, and the last country at least, could have been hardly conquered by Demetrius or Menandros, though we must probably ascribe the conquest of Pattalene to either of both kings. But to which.

Here we must try to supply Strabo's brevity by other accounts. I ascribe to Menandros the subduing of Pattalene and Syrastrene. Strabo makes no mention of these districts as conquests of Menandros beyond those of Alexander's expedition, because Alexander had advanced to Pattalene, therefore in this direction to

νανδρος, εἴγε καὶ τὸν Ὕπασιν (edd.—*νιν*) *διέβη πρὸς ἕω, καὶ μέχρι τοῦ Ιομάνου* (edd. *Ἰσάμου*) *προῆλθε, τὰ μὲν γὰρ αὐτὸς, τὰ δὲ Δημήτριος ὁ Εὐθυδήμου υἱος τοῦ Βακτρίων βασιλέως. οὐ μόνον δὲ τὴν Παττηληνὴν κατέσχον, ἀλλὰ καὶ τῆς ἄλλης παραλίας τήν τε Σαριόστου* (or *Σαραόστου*) *καλουμένην, καὶ τὴν Σιγέρτιδος βασιλείαν. Καθ' ὅλου δέ φησιν ἐκεῖνος τῆς συμπάσης Ἀριανῆς πρόσχημα εἶναι τὴν Βακτριανήν. Καὶ δὴ καὶ μέχρι Σηρῶν καὶ Φρυνῶν ἐξέτειναν τὴν ἀρχήν.* The alterations *Ὕπασιν* and *Ἰομάνου*, "are perhaps necessary." *τε Σαριόστου* occurs together with *Τεσαριόστου* in the manuscripts. Mr. Prinsep (As. Trans. VI. p. 390) first noticed, that by this Surâshtra was to be understood. Apollodoros has perhaps mentioned a king, who was named after his country, as Taxiles was already before named in the same manner. Ptolemy has *Συραστρήνη*; according to him, it is the country between Cutch and the river Mahi, therefore Guzerate, Sigertis (in Sanscrit perhaps Srigarta) must be the coast round Barygaza; Ptolemy has, on the south of the Nerbudda, the town Siripala (Sripala) which perhaps denotes the same name. In Sanscrit this coast has the name of Lata (pronounced Lara) whence the Larice of the ancient authors.

"It is also called Surashtra, and its inhabitants *Surashtras*, the royal and excellent royal offspring. Another name for it is *Gurjjara-rashtra*, or kingdom of the *Gurjjaras* or *Gurjjas* in conversation. Hence it is called the country of *Gourz* or *Giourz* by one of Renaudot's Musalman travellers in the ninth century. From Surashtra and *Gujjara-rashtra* they have made, in the spoken dialects, Surat, and Gurjjarat, and even Gujjerat." Essay on the ancient Geography of India, M.S.S. No. 277. Library As. Soc. of Bengal.

the sea-coast. This interpretation is proved probable by the well known passage in the Periplus,* according to which, coins of Menandros and Apollodotos were still in use during the Roman era in Barygaza. To Demetrius we must assign the conquest of Ariana, viz. the country of the Paropamisades and Arachosia; this is the opinion already formed by Bayer,† on the authority of Isidor of Charax, who mentions among the towns of Arachosia, Φάρσαγα πόλις, καὶ Δημητριὰς πόλις, εἶτα Ἀλεξανδρόπολις, μητρόπολις Ἀραχωσίας, ἔστι δ' Ἑλληνίς. This (town of Demetrius) was probably built by him. But when Bayer thinks Demetrius also founded a town on the borders of the Hydaspes, because Ptolemy says of Σάγαλα ἡ καὶ Εὐθυμηδία (ed-μεδία) the clue is fallacious. We shall not indeed reject the excellent conjecture, that Εὐθυδημία is to be read, and that the town was named after Euthydemos, but why should no one except Demetrius so name a town?

If our remarks above made to the effect, that the Greeks in Bactria previously to the year 200 B. C., possessed no territory whatever to the south of the Indian Caucasus be correct, the following arrangement of our known facts suggests itself. When Euthydemos was relieved from the attacks of Antiochos, he made an invasion, either in person or through his son, Demetrios, of the countries to the south of the Caucasus; here he must have first encountered the Paropamisades. Arachosia bounds on them on the westward, and from thence Demetrios most probably endeavoured to reconquer his paternal inheritance. That here was the main site of his power, is confirmed by the name of the town, Demetrias, and this likewise explains why we have but so few coins of his; they must be looked for in Candahar.

His dominion in western Cabulistan and Arachosia sufficiently explains the title, "King of the Indians." Demetrios, however, pretends, by the adoption of elephants as trophies, to victories over India Proper, and we have no ground for denying his right to them.

It is true, those victories would prove hardly probable, if Menandros were his cotemporary, as Mr. Mueller thinks.‡ But

* p. 17. Huds. † p. 84. ‡ p. 209.

he takes Strabo's words in a too literal sense, while they, as the passage plainly shows, are intended only as general expressions. The coins at least afford no proof that both were cotemporaries.*

The chronological tables to be obtained for the history of Bactria, can only result from a comparison of all the passages relative to this inquiry.

The principal passage on Eukratides is the following, Justin XLI. 6. "Eodem ferme tempore, sicuti in Parthis Mithridates, ita in Bactris Eucratides, magni uterque viri, regna ineunt. Sed Parthorum fortuna felicior ad summum hoc duce imperii fastigium eos perduxit. Bactriani autem, per varia bella jactati, non regnum tantum, verum etiam libertatem amiserunt; siquidem Sogdianorum, et Arachotorum, et Drangianorum Indorumque bellis fatigati, ad postremum ab invalidioribus Parthis, veluti exsangues, oppressi sunt. Multa tamen Eucratides bella magna virtute gessit, quibus attritus, quum obsidionem Demetrii regis Indorum pateretur, cum trecentis militibus sexaginta millia hostium assiduis eruptionibus vicit. Quinto itaque mense liberatus, Indiam in potestatem redegit. Unde quum se reciperet, a filio, quem socium regni fecerat, in itinere interficitur, qui non dissimulato parricidio, velut hostem, non patrem, interfecisset, et per sanguinem ejus currum egit, et corpus abjici insepultum jussit."

First we remark on this passage, that the whole does not refer to Eukratides, namely not that part in which the reasons for the decline and the downfall of the Bactrian empire are enumerated. Throughout the whole passage one idea pervades, viz. that the fate of both empires, the Parthian and the Bactrian, was identical in the simultaneous accession to power of two great monarchs, but opposite in the simultaneous progress of one, to the highest pitch of power; of the other, to total destruction. Under the impression of this leading idea, the author suddenly

* I drew no conclusion for my assertion from the non-existence of the Cabulian letters on the coins of Demetrios, as this may be accounted for by his governing countries more to the westward, where the use of those letters was not so common as in Cabul. It is, however, the most probable supposition that he did not use Cabulian letters, because his successors had the first idea of adopting them (on their coins.)

turns to relate the circumstances which weakened and eventually ruined the empire of Bactria, namely, the wars with the neighbouring nations; this is an important notice, as involving a fact hitherto entirely overlooked, which is, that the detached kingdoms of Drangiana, Arachosia, and India, existed cotemporaneously together with that of Bactria. But it does not follow, that all the wars Eukratides was engaged in, must be the very same, which the Bactrians waged with the Drangians, Arachosians, and Indians, or, in other words, it is not necessary, that the three nations, now mentioned, must have formed independent states before Eukratides, as they may also have become independent after his murder. Moreover, if we may be allowed to follow a clue not wholly authentic, these kingdoms must have originated after Demetrius; for supposing Demetrius king of Arachosia, and that he was here called king of the Indians also, Justin could not separate Arachosia from India in speaking of a time when both countries still obeyed Demetrius. I therefore suspect, that immediately after the overthrow of this king, Eukratides took possession of Demetrios' Indian dominions, while Arachosia and Drangiana, likewise subject to Demetrios, became independent states under their own Satraps. On this supposition the wars by which Bactria was so much disorganized as to fall an easy prey to the Parthians, would have been carried on by the son of Eukratides against the attacks of the united Drangians, Arachosians, Indians, and Sogdians.

Under this view the aspect of Bactrian history is so much changed, that I shall directly mention some facts corroborative of the above.

First. We know, that Eukratides after having conquered Demetrios, turned* his arms against the Indus and Hydaspes,

* Strabo XV. § 3. Ἀπολλόδωρος γοῦν ὁ τὰ Παρθικὰ ποιήσας, μεμνημένος καὶ τῶν τὴν Βακτριανὴν ἀποστησάντων Ἑλλήνων παρὰ τῶν Συριακῶν βασιλέων τῶν ἀπὸ Σελεύκου τοῦ Νικάτορος, φησὶ μὲν αὐτοὺς αὐξηθέντας ἐπιθέσθαι καὶ τῇ Ἰνδικῇ, οὐδὲν δὲ προσανακαλύπτει τῶν πρότερον ἐγνωσμένων, ἀλλὰ καὶ ἐναντιολογεῖ, πλείω τῆς Ἰνδικῆς, ἐκείνους, ἢ Μακεδόνας, καταστρέψασθαι λέγων. Εὐκρατίδαν γοῦν πόλεις χιλίας ὑφ'

probably therefore, against countries belonging either to Demetrios himself, or to a king allied to him.

Secondly. Two kings laid claim to having reigned immediately after Eukratides, though not in Bactria itself, viz. Antialkides in western Cabul, and Antimachos in Drangiana; this latter on the authority of the coins, which point to a victory at sea. In these countries this could have only taken place on the great lake of the Drangians. Both kings first assume the title *νικηφόρος*, and are founders of empires by successful wars; chronology therefore admitting, (on this hereafter,) we may justly attribute to Antimachos the foundation of the Drangian, and to Antialkides that of the Arachosio-Cabulian empires; the foundation of the Indian empire must then belong to a third king.

If there were only one Eukratides, the coins with Cabulian legends, and the title of great king, must be ascribed to the fortunate, though short, epoch of his life, when his reign extended to the Hydaspes. I say short, because he fell by the hand of his son at the very moment of his return. If there were two Eukratides, those coins belong to the second.

We have before this, doubted the existence of Eukratides II, as far as it was inferred from the coins. We have now to examine the passages of authors adduced in his favour. According to Bayer's assertion, Eukratides is spoken of in a way unsuited to the victorious king of this name; he thinks, that the son had put to death his father, because he protected the Parthians, who assisted him against Demetrius. But all that we learn concerning the relations of both empires, never shows a friendly, but on the contrary an entirely hostile intercourse. We will not lose our time in conjectures as to the motives of that crime.

The passages which are said to afford the argument mentioned, are the following:—Strabo XI, 9, 2. *ἀφείλοντο* (the Parthians) *δὲ καὶ τῆς Βακτριανῆς μέρος βιασάμενοι τοὺς Σκύθας, καὶ ἔτι πρότερον τοὺς περὶ Εὐκρατίδαν.*

ἑαυτῷ ἔχειν, ἐκείνους δ' αὐτὰ τὰμ εταξὺ ἔθνη τοῦτε Ὑδάσπου καὶ τοῦ Ὑπάνιος, τὸν ἀριθμὸν ἐννέα, πόλεις τεὲ σχεῖν πεντακισχιλίας, κ. τ. λ. This cannot be but a contradiction of Apollodoros himself. Groskurd's Erdbeschr. Strabo III. 109.

This passage must be explained by the statement, above mentioned, that the Parthians had deprived Eukratides of two of the Bactrian Satrapies, Turiva and the Aspiones; they afterwards took from the Scythians either this or another northern part of the Bactrian empire; they took it therefore from the very same Scythians, who under Euthydemos already threatened an irruption into Bactria, and who must afterwards have found an opportunity of invading this country. Why might not Mithridates VI. have availed himself of the siege of Eukratides by Demetrios, in order to subdue the Turanian Satrapies? Beyond this passage there is no mention whatever of Eukratides, and we are evidently not necessitated to adopt two kings of this name.

It remains to ascertain the mode of the downfall of the Bactrian empire. It is ordinarily ascribed to the Scythians, according to Prolog. Trog. Pom. XLI. "Deinde quo repugnante Scythæ gentes Sarancæ, et Asiani Bactra occupavere, et Sogdianos." But it is not borne in mind, that while Mithridates reigned in Parthia, the Scythians had not power sufficient to enable them to advance southwards; under Arsakes VII. indeed, or Phrahates II, who was killed by the Scythians, this conquest of Bactria by them may have occurred, whether Arsaces himself or another Greek king, who re-established himself in Bactria, be understood under the term of the epitomator: "*quo repugnante.*" I say *who re-established himself*, as it is certain, that Mithridates the Great, had before taken possession of the Bactrian empire, and governed it till his death. "Bactriani, per varia bella jactati, non regnum tantum, verum etiam libertatem amiserunt, siquidem—ad postremum ab invalidioribus Parthis, veluti exangues, oppressi sunt". The term "*weaker,*" refers to the remark Justin had previously made, that the Parthians were in the beginning of their power much *weaker* than the Bactrians. Mithridates therefore is the real subverter of the Baetrian empire.

There exist some passages on the conquests of Mithridates towards Bactria and India, but they require a critical examination.

According to Diodorus,* who perhaps imagined that king to

* Fragm. ed. Bip. X. p. 91. ὁ Ἀρσάκης ὁ βασιλεὺς τὴν βασιλείαν ἐπὶ πλεῖον ηὔξησε. μέχρι γὰρ τῆς Ἰνδικῆς διατείνας, τῆς ὑπὸ τοῦ Πώρου γενομένης χώρας ἐκυρίευσεν ἀκινδύνως.

have taken possession of the Indian dominion of Eukratides, he conquered the empire of Porus. Independently of the little authority of Diodorus, Porus was considered since Alexander's time as a mere representative of Indian sovereignty, generally speaking, and it must depend upon other passages, whether those words mean any more, than that Mithridates extended his power in that direction. Of much less weight is Orosius, a still later authority; (V. 4) "Omnes præterea gentes, quæ inter Hydaspem fluvium, et Indum jacent, subegit Mithridates, ad Indiam quoque cruentum extendit imperium." Orosius was possessed of a laudable piety, of no great understanding, and rather of a passion for rhetorical flourishes, than of any desire to attempt critical exactness. What were the many nations between the Hydaspes and the Indus, and what were they in comparison to the great empires Mithridates possessed? The only exact authority, that of Trogus, certifies merely that Mithridates' dominion extended to the Indian Caucasus. Justin XLI. 6. "Imperiumque Parthorum a monte Caucaso, multis populis in ditionem redactis, usque flumen Euphratem protulit."*

If Mithridates had reigned to the south of the Hindookoosh, coins of him would also have been discovered in the rich mine at Beghram, moreover the continuance of the Grecian empires in Cabul and about the Indus, discourages this opinion.

We have above attributed to the Parthians the overthrow of the Greco-Bactrian empire; the time of this event may be determined with tolerable exactness; Justin XXXVI. 1, says of Demetrios Nicator. "Bellum Parthis inferre statuit, cujus adventum non inviti Orientis populi videre, et propter Arsacidæ regis Parthorum crudelitatem, et quod veteri Macedonum imperio assueti, novi populi superbiam indigne ferebant. Itaque quum et Persarum, et Elymaeorum, Bactrianorumque, auxiliis juvaretur, multis proeliis Parthos fudit. Ad postremum tamen, pacis simulatione deceptus, capitur, etc." This captivity hap-

* The same is stated in an account, which, though of a later date, is derived from good authority. Acct. Sancct. ad XXX. Sept. vol. VIII. 3 20. Πάρθοι ἐν εὐτυχίᾳ μεγίστῃ ὄντες καὶ κρατοῦντες τῆς τῶν Περσῶν βασιλείας καὶ Ἀρμενίων καὶ Ἰνδῶν τῶν γειτνιαζόντων τοῖς ἑῴοις Πέρσαις, ἔτι δὲ τῶν σκληροτάτων Μασσαγετῶν.

pened during the year 140 B. C. and as Mithridates died only a few years after this event, and as to him is expressly ascribed the conquest of Bactria, this must have occurred about the year 139 B. C. In the foregoing passage, Bactria appears then, for the last time, as an independent empire in alliance to the Seleucides against Parthia, whether it were under a son of Eukratides, or a successor of this king. As Elymais and Persis alone are mentioned, and not Drangiana and Arachosia, the inference may be admitted, that the two latter empires were already occupied by the Parthians.*

One datum only for the more early Bactrian history, may still be derived from extant authors, the accession of Eukratides.

According to Justin, Eukratides ascended the throne at the same time with Arsaces VI.; but the statements and opinions on this very point are unfortunately very uncertain. Bayer upon his investigations places the commencement of the reign of both about 181 B. C.

According to Visconti, Mithridates' accession occurred 165 B. C. (Bayer p. 86, Visc. Iconogr. III. 70) Here are indeed to be found reasons for the probability only of the fact, and they apparently are in Bayer's favour. We perhaps fall into the less error of the two by adopting the medium between both dates, 175 B. C.† The first expeditions against India under Euthydemos, his death, the foundation of an independent king-

* Bayer (p. 90) has thoroughly reviewed a difficult passage of Orosius referring to this place.

† Mithridates' accession must not be placed too far down, as he died at an advanced age "gloriosa senectute," and it is likely ascended the throne early. Another reason for the determination of the foregoing date, is that the war of Demetrios with Eukratides, must not be fixed at too late a time. The former, was at the conclusion of a peace between his father and Antiochus, a youth, about 20 years old. If he now fought in the 55th year of his age with Eukratides for the possession of Bactria, this war happened 30 years after, 200 B. C. or 170. If our conjecture were correct, that Antimachos could only have acquired his empire in Drangiana and in its neighbourhood after the overthrow of Demetrios, this would be another confirmatory reason. It is not necessary to bring him in direct parallel with Antiochus IV.; yet the commencement of his reign cannot be traced to a later period than 164, but rather to an earlier one; M. R. R. adopted the year 170.

dom by his son Demetrios, the expulsion of the Euthydemides from Bactria, either by Eukratides, or by a predecessor of his, all those events must be assigned to the years 200—175 B. C. Between 175—140, according to our foregoing review of the facts, occurred the overthrow of Demetrios, the murder of Eukratides, and the reign of his son, or of his successors. All is here uncertain, save that the reign of Eukratides must not be extended too far, as he fell in the midst of his victorious career, and appears to have made only one campaign in India.*

§ 16.

The Scythians in Bactria.

Euthydemos mentioned to Antiochos as a reason for not overweakening his power, that in this case he would not be able to repel the northern barbarians, and that Antiochos' own provinces would run the risk of being inundated by the invading current of the barbarian hordes. (Polyb. XI, 34.)

The Bactrian kings had in their palmy days possession of the country of the Scythians in two directions; to the east, beyond the Mustag, the provinces of the Phrunians and Seres, and on the north towards the Caspian the Satrapies of Turan, and another named after Aspiones. Mithridates had taken the latter, probably when Eukratides fought with Demetrios.

Among the nations in warring with which the Parthian empire became exhausted, the Sogdians are mentioned; they can hardly be Sogdians properly speaking, but rather the Saces, who had invaded Sogdiana; Strabo represents them as of that nation, when he says on the occasion of the great irruption of the Scythians, that they had started from the country beyond the Jaxartes, "τῆς κατὰ Σάκας καὶ Σογδιανούς, ἣν κατεῖχον Σάκαι."

They are probably the same Saces from whom Mithridates took away a part of Bactria† occupied by them, and who alrea-

* There will be found a great difference between my numbers and those given by Mr. Mueller (at o. p. 218.) This is no place for a critical comparison of both statements; I beg only to remark, that the reign of 20 years (160-40) Mr. Mueller assigns to Eukratides in India, is as improbable as the reign of 40 years, generally ascribed to him.

† XI, Scyth. § 2.

dy so early as the days of Herodotus (VII. 64) bordered on Sogdiana, and whose name was given to all nomad tribes and people of equestrian habits in Turan. They appear the foremost in the series of invading hordes.

The great inroad of these nations is noticed in two passages. Prolog. Trog. Pompei XLI. "Deinde quo repugnante Scythiæ gentes Sarancæ et Asiani Bactra occupavere, et Sogdianos." Strabo XI. § 2. "Μάλιστα δὲ γνώριμοι γεγόνασι τῶν νομάδων οἱ τοὺς Ἕλληνας ἀφελόμενοι τὴν Βακτριανὴν, Ἄσιοι, καὶ Πασιανοὶ, καὶ Τόχαροι, καὶ Σακάραυλοι, καὶ ὁρμηθέντες ἀπὸ τῆς περαίας τοῦ Ἰαξάρτου, τῆς κατὰ Σάκας καὶ Σογδιανοὺς, ἣν κατεῖχον Σάκαι."*

If I now maintain, notwithstanding this latter passage, that it was not these Scythians, but the Parthians, who destroyed the Grecian empire in Bactria, the reasons are quite evident. The Scythians could not conquer it during the reign of Mithridates, and when they took possession of Bactria, the country was no longer under the dominion of the Greeks, but of the Parthians, as the irruption of the Scythians happened at the death of Phrahates, about 126 B. C.

Of the four nations mentioned by Strabo, we know nothing of the Pasians; the Sakaraules seem to have been a separated tribe of the Saces; the Tochares received their kings out of the nation of the Asianes. (Trog. Pomp-prolog. XLII. "Additae res Scythicæ, Reges Thocharorum Asiani, interitusque Sarducharum.)"

We have then more particularly to deal with two nations, with the Saces and Tochares.

The gradual progress of these nomads over eastern Iran, can be traced in the Parthian history; having been taken into pay by Phrahates against Antiochus of Sida, they arrived too late. As now they received no compensation whatever, and they were led against no foe, they commenced plundering the Parthian provinces, and Phrahates fell in a battle against them, 126 B. C. (Justin XLII. 1.) This year is the real date of the Scythian inroad. The next

* The following words καὶ τῶν Δαῶν κ. τ. λ. does evidently not further refer to this subject.

king of the Parthians, Artaban, II. (Arsaces VIII) we find again engaged with the Tochares, and dying of a wound received in this war.* His son Mithridates fought again, and with more success, against the Scythians. Under his reign commenced the struggle of the Parthians against Rome, and supposing the Scythians up to that time able to maintain themselves in Bactria and Sogdiana, they were then doubtless at full liberty to assume unrestrained dominion. Nor do we find, that the Parthians attacked them any more. Sanatroikes, 77 B. C., is placed on the throne by the Scythians, viz. the Sakaraules; as was the case with Phrahates IV. when expelled by his subjects, in the year 37 B. C. †

Ancient writers do not give us the whole detail of the Scythian settlement in Bactria, nor do we know the name of any of their kings, any more than the manner in which they divided among themselves the conquered provinces. Only one notice which is in fact important, has been preserved; Isidor of Charax, says, (p. 9) Ἐντεύθεν Σακασταν ἡ Σάκων Σκυθῶν, ἡ καὶ Ἡραιτακήνη.

We observe, as the Saces were the foremost of those nomades, so did they advance farthest to the south and west; they had occupied the Drangian Praitakene, while the Tochares, under the Asianian kings, settled themselves perhaps nearer to the eastern and northern frontier.‡

We must not here neglect receiving such illustrations as we are offered by Chinese authorities on the emigration of these Scythians, although the author of this treatise could not directly compare those authorities, and is aware of the confusion

* I. C. XLII. 2. As the Thochares are distinguished from the Scythians, these latter appear to be the Sakaraules. Scythæ, depopulata Parthia, in patriam revertuntur. Sed Artabanus bello Thogariis (sic) illato, etc.

† I. C. XLII. 5. Appian. Mithrid. 104.

‡ A Median Paraitakene was between Persepolis and Ecbatana, Arrian. Anab. III. 19. Ptolm. VI, 4. Diodor. XIX. 34. Strabo XVI, init. Beside this a Sogdian town of the same name, Arrian IV, 21, which was also named Gabaza and Babakene. Curtius VIII, 14, 17. Zmpt. eastwards of Karatag towards the lofty Belurtag. Thirdly, that above mentioned between Drangiana, Cabul, and Arachosia. Ptolemy calls it Tatakene, perhaps country of the Tatas? VI, 19. In Paraitakene lies the old Persian *Paruta, hill,* these hills are the Kohistan of modern Persian geography.

caused by Chinese misconstruction of names. But these accounts however afford the great advantage of having originated with a nation, which had entered upon various relations with those Scythians, and was informed by embassies of their circumstances.*

These accounts however require a critical examination in various points, and even here, though only limiting myself to the most remarkable facts, I cannot quite omit this task.

The Yuetchi, a nomad tribe of inner Asia first appear in the upper Hoangho, whence they are repelled by the growing power of the Hioungnus; one sept called *the little*, turn southwards to Tibet; the larger division bearing the name of *the great*, set out farther westwards to the countries beyond the Jaxartes; this event happened in the first half of the second century before our era.† This division originally consisted of five hordes.

In the country recently occupied by them, they fall in with the people of an earlier emigration, called the *Szus, Sais, Ses*, also nomades under some petty chiefs. This tribe is forced to retire further west, and as the Yuetchis conquered new pastures on the borders of the Ili, the Szus must have been removed to the Jaxartes. In these *Szus* the Saces have been long ago recognized; this corresponds with the fact, that the Saces had

* The most important facts are already put together by De Guignes: "Sur quelques événements qui concernent l'histoire des Rois Grecs de la Bactriane et particulièrement la destruction de leur Royaume par les Scythes, etc" in Mémoires de l'Academie Royale des inscriptions et belles lettres. Tome XXV. II. p. 17. Abel Rémusat has supplied information of this kind in some writings, viz. in the "Récherches Tartares," in his "Mélanges," in his "notes to Foë Koue Ki". Klaproth in the "Tableaux Historiques de l'Asie." It is true, great mistakes have been pointed out in the work of De Guignes with respect to his interpretation of Chinese names; but he is not prepossessed, as his successors are, by the monomania of recognising in the Chinese accounts German tribes in inner Asia, as Goths, Getes, Jutes, Juetes, Jits, and Jats. The reading *Yueti* instead *Yuetchi*, originates in this visionary idea, and the Russian Sinolog, father Hyacinth, who was not acquainted with this beautiful discovery, quietly continued writing *Yuetchi*.

† De Guignes, p. 21. Klaproth, p. 57. p. 132. Rémusat to Foë K. p. 83. The year 163 B. C. is mentioned.

already, before the destruction of the Parthian empire, taken possession of a part of Sogdiana. This era likewise agrees with the fact above mentioned, that the Sogdians had contributed their share in weakening the power of the Bactrian empire; this event must therefore have happened in the latter days of Eukratides, or in the time of his successor, posterior to 160 B. C.

The Yuetchis remained not long in the possession of their new country; another nation, the *Ouann*, flying from the *Hioungnus*, deprived them of those districts; the Yuetchis ejecting the *Szus*, occupied the provinces possessed by them; the *Szus*, pushed to the south, and an opportunity of taking possession of the country *Kipin;* the Yuetchis, following in their wake, take the country of the *Tahia.** A Chinese general, *Tchamkiao*, accompanied this expedition of the Yuetchis, and the well ascertained event occurred immediately previous to the year 126 B. C.

This is the very year in which Phrahates was killed by the Scythians; the Yuetchis and the Szus flying from them, are therefore the Tochares and Saces of western writers, whom Phrahates is reported to have taken into pay. These mercenaries were perhaps at first the Szus, and we indeed find Artaban opposed to the Tochares. Whether the Szus were driven into Bactria, according to the Chinese account, or called into that country as according to Justin, both statements may be right as regards their immediate narrative. Phrahates wished to avail himself of the Scythians, pressed into his neighbourhood, to strengthen his army. While Mithridates, "ultor injuriæ parentum," arrested for some time, it appears, the progress of those Scythians.

The Yuetchis divided the conquered districts according to the number of their hordes, into five parts; they had the country of the *Asi*, or *Ansi*, whom De Guignes reads *Gansi*, as their western frontier; it is as appears probable correctly interpreted as the country of the Parthians.†

* De Guignes, p. 22. p. 23. Kl. p. 133. Rém. p. 83.

† Rém. p. 83. De Guign. p. 23. Kl. p. 133.

Turning to the Szus who had conquered Kipin, we have already defined generally the situation of this country, which will become still clearer from the reports on the Szus. (De Guign. p. 29.) The country Kaofu, it is said, is very extensive; the inhabitants resemble the Indians in manners, and character, being rather mercantile, than warlike. Previous to their latter subjection under the Yuetchis, one part belonged to the Indian kings, another to the Ansi (Parthians); a third to the kings of Kipin (viz. the Szu-sovereigns of his account). Hence it clearly appears, that Kipin is the country in the west of Cabul below the Kohi Baba to the westward. Combining with this, the statement that Sakastane received its name from the Saces, we find, that the Kipin of the Chinese is the country of the western Paropamisus, the pastures of which are moreover occupied by a Mongolian tribe of nomades, the Hezarehs.* "Kipin" however is a political not a geographical term, and may on occasion also embrace portions of Cabul, Arachosia, and Drangiana.

What the Chinese mention of the productions of art in this country, as silks, gold, and silver vessels, refers of course to the dexterity of the subjugated inhabitants, or those articles were imported by trade. A notice of much importance, is the following, that they struck gold and silver coins; on the obverse the effigy of a horseman, on the reverse, of a man.†

As the Chinese had commercial intercourse with the empire Kipin, the names of some kings are mentioned. During the reign of the emperor Woo-ti, (died 87 B. C.) *Utolao* (or *Ontheoulao*) reigned in Kipin. His son was killed by a certain *Immoffu*, who usurped the throne 30 B. C. Kipin is still spoken of at a much later time, but it is not noticed, whether it continued under its kings from the people of the Szus; this is,

* To this passage refers the misplaced and apparently absurd remark with Steph. De urb. s. v. Ἀραχωσία, πόλις οὐκ ἄπωθεν Μασσαγετῶν. How comes Arachosia to the country of the Scythes? However, the Scythes are meant possessing Kipin.

† De Guign. p. 25. He knew of the Eukratides' coins only those with the type of the Dioscuri, and referred this notice to them.

however, improbable, as it is stated, that the Yuetchis took afterwards possession of this country likewise.*

Now leaving the Szus for the present, we will recur to them, when in the progress of our research we have to consider the countries south of the Caucasus.

The Ansi, having their abode to the west of the Yuetchis, were a powerful nation with many towns; they had gold and silver coins, bearing on the obverse the image of the king, on the reverse a male figure. When a king died, his successor struck new coins. The Ansi wrote on hides, in horizontal lines (not in vertical, as the Chinese), carried on an extensive trade, and had conquered many countries.† De Guignes justly compares the constant type of the more ancient coins of the Arsacides with the portrait of the king, and the reverse of a Parthian bending a bow.

But how to explain the fact, that the Chinese term the same people Yuetchis, while the Greeks call them Tochares. Who are the Tahias? who the Ousuns? De Guignes, with whom I agree, holds the latter as the Asiani; they may have given kings to the Yuetchis, in the same manner as so many Turkish hordes stood afterwards under the dominion of the successors of Gengis Khan. The Tahias are taken for the Dahes, the Δααὶ, and the Yuetchis on their irruption into Sogdiana must have indeed met with tribes of this people.‡ When it is said, however, that the Yuetchis conquered all the countries of the Tahias, the Dahes had either spread themselves over Bactria to the southward, or the name of the country first conquered was transferred to those afterwards subjugated.

The name Tochares afterwards occurs with the Chinese under the form *Thuholo*, as they could not otherwise express it.§ We still recognize Tocharestan, which has received the name from them. But it need not be the same people; the Tochares of our

* De Guign. p. 27. Hyacinth in Ritter's "Erdkunde" VII. 682. etc.

† De Guign. p. 28.

‡ According to Strabo XI. Scyth. § 2. Καὶ τῶν Δαῶν οἱ μὲν προσαγορεύονται Ἀπαρνοι, οἱ δὲ Ξάνθιοι, οἱ δὲ, Πίσσουροι.

§ Neumann. Asiat. Studien. I, 179.

time are Turks; for I think I may venture the conjecture, that this name in the Perso-Indian languages denoted the inhabitants of the cold snowy table land of the Belurtag; this nation may therefore have had the name of Yuetchis, or a similar one, and yet have been called Tochares, by the Bactrians, as they arrived from those snowy districts.*

Following the farther fate of the Yuetchis in Bactria, there afterwards appears a king named *Khieout-Sieouhi*, who uniting the other hordes, makes war on the Parthians, takes Kaofu from them, then also conquers Kipin, and Hantha; but he more likely took Kipin and Kaofu from the Szus. Klaproth places this event in the year 80 B. C.; Rémusat in the first century of our era; De Guignes 100 years after their first settlement in Bactria, therefore 26 years B. C.; so likewise does an anonymous translation of Chinese history.† The Chinese accounts certainly correspond, and we owe this pleasing incertitude only to our European chronicles. We hope to be excused ascribing the greatest negligence to our countryman, Klaproth. But we must continue; Khieout-Sieouhi is said to have died aged 80 years. His son *Yenkaotching* (the commencement of whose reign, would therefore have been about 30 A. D.) conquered India, advancing far to the south and to the east. The Yuetchis having become powerful, waged a war even against the Chinese under their governor *Pantchao*, in the

* *Tushara*, and with the pronunciation *kh* for *sh*, *tukhara*, denotes in Sanscrit *snow, ice, frost*, and so is named in the old Indian geography a people in the north of the Hindookush. A king of Kashmir, of the family of the Thuholos, 600 years after Buddha, (therefore 56 A. D.) is mentioned by the Chinese Buddhists; this was long before the Chinese knew Thuholo, and a proof that the Yuetchis, to whom this king must have belonged, were named *Tukhara* in India. The Yuetchis however, or a neighbouring people of them in India, are also called *Turushka*, since Kanishka is said to have belonged to this nation, *500 years after Buddha*.

† De Guign. p. 27, who read Tata instead of Hantha, Klaproth. p. 133, has Pouta; Rém. p. 83. Hantha. As. Trans. vi. p. 63. "the Chinese general Chang-keen (Tcham-kao) was sent as ambassador to the Yuetchi by the emperor Woote (A. C. 126.) And about a 100 years after, a prince of this nation subjected the Getes in Kophene (Szu in Kipin) and India was again subjugated by the Yuetchis."

westerly tributary provinces of China; this was carried on in Khoten, in the year 98 A. D., and gave occasion for the discovery of the Caspian Sea.* Yenkaotching is however not said to have made this war, and it is very improbable, that he did so, as it occurred between the years 75-98.

The greatest power of the Yuetchis obtained therefore in the first century of our era. The father, Khieoutsieouhi, had engaged in hostilities with the Parthians; if this were the same in which Prahates IV. expelled Tiridates by the assistance of the Scythians (Justin XLII. 5,) it commenced about the year 40 B. C., and his son would be more correctly placed in the years beginning from 20 or 25 A. D.†

The power of the Yuetchis continued to the third century.‡ After this time it was weakened by new hordes of northern barbarians. Still however their empire maintained itself; and Chinese history in the beginning of the fifth century makes mention of a king *Kitolo*, who again undertook an expedition against India. India appears therefore meanwhile to have been taken from the Yuetchis. Kitolo is said to have conquered Balkh, Gandhara, and five other provinces. According to others, Kitolo's son founded the empire of "The Little Yuetchis" in *Foeleoucha*; here is some confusion, at least in the translations.§

Let us now sum up these facts. First, we have an empire, founded in Kipin by the Saces, commencing about the year 126 B. C. This may have maintained itself till the Yuetchis advanced southward, therefore almost to the beginning of our era. It embraced a part of Cabul, and we must hereafter examine, whether their kings did not also reign on the borders of the Indus.

Secondly, an empire of "The Great Yuetchis," or Tochares, in Bactria and Sogdiana, divided into separated hordes, to the

* De Guignes, p. 30. Rémusat, Remarques sur l'extension de l'empire Chinois, p. 120. Mr. Ritter, Erdkunde VII, p. 554. has translated Rémusat's term 75 A. D. by 75 B. C.

† De Guignes, p. 28. But he certainly makes an improper use of this notice.

‡ De G. p. 31. R. to F. p. 83. Kl. p. 133. As. Trans. VI. 63. where the year 222 A. D. is stated.

§ De G. p. 31. R. to F. p. 84. Kl. p. 134.

year 40 B. C., and limited to the north of the Caucasus, thence conquering to the south of the mountains, Kipin, Kandahar, Cabul, including a large portion of India. The subversion of this empire coincides with the accession of the Sassanians.

Thirdly, the empire of "The Little Yuetchis" in Gandhara and India, at the commencement of the fifth century.

It is uncertain, whether we still have coins belonging to the Yuetchis, whose dominion was only in the north. We could only be inclined to assign to them those having on the reverse a horse, and not Cabulian legends.

Euthydemos and Eukratides as sovereigns of Bactria, famous for the fine breed of its horses, appear to have likewise adopted this symbol on their coins. And supposing even that coins with elephants belonged to the earlier period of the Yuetchis, we must ascribe this to the fact, that some of their hordes boasted of having penetrated to India.

Numismatology apparently profits us more for the history of the Scythians in the south of the Caucasus; but we must first take up again the thread of the Greek dynasties.

§ 17.

Greco-Indian empires.

We first call to mind, that the campaigns of the Greek kings from Bactria against India, can have but commenced about 200 B. C; that they originated with Euthydemos or his son Demetrios, and were directed against the power of the kings of Palibothra, the descendants of Chandragupta. This latter assertion must be more exactly detailed.

We know from ancient writers, that Chandragupta in his conclusion of peace with Seleucos Nicator acquired parts of Gedrosia, Arachosia, and of the country of the Paropamisades, and that their friendly relations continued under the sons of both kings, Amitrajâtâ and Antiochos Soter.* The third king of the Indian dynasty, Dharmazôka, is a name very celebrated with

* De Pentap. Ind. p. 44. Zeit-schrift fuer die Kunde des Morgenlandes i. 109.

the Buddhists, because he afforded a general patronage to their religion; a fact now undoubtedly confirmed, as the inscriptions are decyphered, by which Azôka throughout his whole empire invited the adoption of the doctrines of Buddha.*

We may therefore rely upon the statement in the Buddhist annals, that Dharmazôka enjoyed a long, peaceful reign during the years 260—219 B. C.

To corroborate the fact, that the dominion of Azôka, like that of his predecessors, extended to the Caucasus, it may be mentioned, besides the absence of reports stating the contrary, that the Chinese pilgrims also met with in the valley of the Panjhir monuments erected by Azôka for the glory of his religion.†

As another confirmation may be adduced the circumstance, that Antiochus in the year 205 *renewed* the confederacy with the king of the Indians, which could be only the case with a king of the Maurja-dynasty of Palibothra.‡ The king then mentioned, Sophagasenos, appears to be a son of Azôka.§

Contrary to this opinion, the successor of Azôka is named Sujazas (*"of good renown"*) in the Brahmanic genealogies; but we can hardly be deterred by this from comparing him with Sophagasenos (Subhagasena, *"of the victorious army"*‖) as these kings even publicly substituted their titles of honour for

* As. T. VI. p. 472. 791.

† Foë K. K. p. 395.

‡ Also this name was known to the Greeks; see the interpretation of the word Μωρεῖς in my Prâcrit grammar, p. 247.

§ Zeitschr. I. 110.

‖ M. de Schlegel, Ind. Bibliothek I. p. 258. The Chinese traveller Fahian also proves, that the son of Azôka reigned in Gandhara, Foë K. p. 67. If Rémusat has correctly translated the Chinese word "Fai," the Buddhists have called him "Dharmavardhana." The son of Azôka, who also reigned in Kazmira, is called Jalôka in the annals of the country, (Râj. Tarang. I. 107) a reading, which is hardly correct. It is evident from the succeeding verse, in which is certainly a play on the word *Jaza*, fame, that in the former text, this word also occurred in his name. He is said to have cleared the country from invading barbarians. At the same place, p. 115. His successor is a king of another family. From these traditions I shall only retain, that inroads of barbarians are mentioned immediately after Azôka, and that with his son the empire of the kings of Palibothra in Kazmira found its termination.

their original names, as *Azóka styles himself Pijadasi* on the columns.

The successor of Sujazas, Dazaratha, is confirmed by the inscriptions in the Buddhist temples at Gaja, in Magadha,* (Behar.)

I think it is by no means a rash attempt to connect these Indian reports with our investigations. Thence would result the following arrangement, viz., that Sujazas, who must have died at the commencement of the second century B. C. if he had reigned twenty years (on this we have no information), is the very same Palibothrian king with whom Antiochus renewed the confederacy; secondly, that the barbarians, who under his reign invaded India, are the Bactrian Greeks themselves; and, thirdly, that he or his successor, despite of Indian accounts to the contrary, was expelled by them from the westerly parts of his empire.

From our previous inquiry, it was evident, that Demetrios undoubtedly reigned in Arachosia, and thence more westward; whether his rule extended in an easterly direction, was left uncertain. We must now, however, appropriate to Agathokles also a share in the first expedition of the Bactrians against India, for by the beautiful execution of his coins he is coeval with Demetrios; he claims a purely Indian country as his dominion, and especially eastern Cabul; lastly, by the adoption of the old Indian letters he shows, that he succeeded in these provinces the kings of Palibothra, who used the very same alphabet. Nor do I know how Agathokles can obtain any other classification either at a later or earlier period, unless immediately before Eukratides and coeval with Demetrios. I shall not waste our time by conjecturing in what relation they stood together, how Agathokles commenced his career, and whether he belonged to the family of Euthydemos, or not.†

* This also is a discovery, made by Mr. Prinsep, As. Trans. VI. p. 677.

† It might even be maintained, that by a confusion in the catalogues of names, Agathokles had been received as Sujazas into Indian history, as both words denote the same, and as both kings, according to the comparison of facts, above given, would be of the same period. It is evident, that we have not to recognise the Indian king on the coins, because

Pantaleon, with whom this Greco-Indian empire terminated, must have succeeded Agathokles, whom I therefore hold as king of Nagara Dionysopolis. Both of them have only Indian letters on their coins, and with them too Dionysos disappears.

If we thus have correctly determined the empire of Agathokles and Pantaleon, it must be one of the districts of which Eukratides took possession on his Indian expedition; for after the victory over Demetrios, he carried his arms against the Indus and Hydaspes. We have already noticed, that he probably did not reign there for a long time.

I have above explained my idea, how by the division of Demetrios' power the independent Grecian dominions of Drangiana and Arachosia, referred to by historical authority, had been formed; the Indian empire, mentioned by the same authority, was, if not actually formed, yet first consolidated after the murder of Eukratides. At least the conjecture is natural, that the abhorrence of such a deed must render it easy to an enterprising governor to find ready assistance in a revolt against the parricide. The first Greek king of this Indian empire was certainly Menandros, let the various dates given for his era and his accession differ as they may from mine. Here conjecture must be set against conjecture, and I do not think myself the supposition sound, that Menandros may have acquired the title of *deliverer*, peculiar to this country, by delivering it from the hateful dominion of the son of Eukratides.

On these three Indo-Grecian empires we may make the following conjecture. We assigned to Antimachos an empire

be would have called himself in this case Sujazas, and not Agathuklajô. But if Agathokles deprived the Indian Subhagasêna of the provinces on the Indus, and in the catalogues of kings was mentioned as his cotemporary under the name Sujazas, he might be easily confounded with the name of the Indian king, especially as the son of Azôka had at least two names, a Brahmanical and a Buddhist, like his father, and perhaps his grandfather (Zeit-schrift I. 109.) This explanation is not quite satisfactory to me; the coincidence of both names, above mentioned, is however, hardly accidental; and it is scarcely an objection, that Pantaleon, who probably reigned but a short time, has not left a similar trace in the Indian annals; he must be looked for in Dazaratha, which is impossible.

in Drangiana, as here only a maritime victory, of which he boasts, can have taken place.* To this may be added the following:—The Chinese, by reporting, that the kings of Kipin represented a horseman on their coins, alluded probably themselves only to the Scythian kings; these, however, had certainly adopted the custom from their predecessors.

As now Antimachos, as well as his successor Philoxenos, represent themselves as horsemen, we venture to refer them to Kipin; likewise the humped bull of the latter king alludes to Kipin. This country moreover is Sakastane, or Segistan of a later period.

Antialkides† and his successor Lysias lay claims to having reigned in Cabul and in its neighbourhood; if we have correctly interpreted the report of Justin, they must have possessed, besides Cabul, a part of Arachosia.

Amyntas and Archelios must perhaps also be classed in these two kingdoms.

The empires founded by Antimachos and Antialkides, probably existed but a short time; the first seems to have originated at the death of Demetrios, the second after the murder of Eukratides. We can assign to them no longer existence than to the year 126 B. C., when the Saces settled themselves in Kipin; and scarcely even to that period, as the Parthians had already taken possession of the Bactrian empire. In the passage in which the last struggle of the Bactrians against the Parthians is mentioned, Elymeans are indeed only noticed besides Syrians, and no Drangians or Arachosians. The small number of royal names also corroborate this short duration.

It would be too doubtful a measure to extend the use of Cabulian letters to Drangiana.

* Mr. R. R. p. 18, thinks, he may have assisted Antiochus IV. on occasion of a victory over the Egyptians; but this appears hardly possible, even if he had reigned on the Indus.

† Mr. Mionnet has published (VIII. 483, 520,) a coin of Antialkides, before unknown. Obverse: image of the king with the Causia, and the upper part of the Chlamys. Reverse: Jupiter seated, holding in his right hand a Victory with a Palm, in the left hand a spear, placed across the shoulders; on the right hand near his seat an elephant, who holds a crown in its elevated trunk. Antialkides perhaps obtained the crown by his participating in an Indian expedition.

Still we must here keep in view, that the alphabet on the coins, if indeed derived from the west, must have been imported to Cabul through Candahar and Drangiana, as it did not come to Cabul through Herat and Bactria. Besides this however Antimachos and Antialkides may have imitated the example of Eukratides.

The Greco-Indian empire of Menandros must have existed longer. The number of the names Menandros, Apollodotos, Diomedes, Agathokleia, Hermaios, renders the assumption necessary. I have proved it probable that this line of kings was not encroached upon by the Parthians. The last coins, those of Hermaios, refer to the very same time, when expeditions against the Soter-dynasty may have been first planned by the Scythians. The widely extended empire of Menandros seems under Hermaios to have been limited to Beghram; Menandros must have possessed a kingdom eastward of Cabul, if Antialkides, as it appears, ruled then immediately after Eukratides. It would be, however, too bold to determine any thing concerning the mutual contests of these powers.

From the great number of the Hermaios coins, it is not improbable, that he either himself reigned long at Beghram, or that his dynasty continued there at least for some time; in the mountain country, easily defended, a smaller kingdom might maintain itself with more ease for a longer time. If the relation Kadaphes holds towards Hermaios be correctly stated, the Grecian dominion was here overthrown by an attack from the north, i. e. from the country of Kapisa; the power of Kadaphes itself, however, appears to have been of no great importance or long duration. A greater Indo-Scythian kingdom, as for instance that of Azes, may have absorbed it.

§ 18.

The Saces, the Tochares, and Parthians in Cabul and India.

We have above left the Saces in the country Kipin, where they settled themselves, about the year 126 B. C., while the Tochares, following them, roamed throughout Bactria, from whence

they, half a century afterwards, united in one power, and penetrated beyond the Indian Caucasus to the southward. Looking for historical authorities of the further fate of the Tochares and Saces, I find, that they are brief and meagre, and it appears hardly possible to derive from them any certain results; they must however be examined.

If the geographer Dionysios composed his poem as early as it is ordinarily apprehended, he would have been the first who made mention of the Scythians about the Indus. v. 1088. Ἰνδὸν πὰρ ποταμὸν νότιοι Σκύθαι ἐνναίουσιν.

Eusthathius makes the just remark, that they were Indo-Scythians, as this name could not have been given them previously to their arrival in India. The era of Dionysios being however very uncertain, nothing can be inferred from his passage as to the time of the first advancement of the Scythians to the Indus.

The Periplus of the Erythræan sea, as well as Ptolemy, enable us to determine the extent of the Indo-Scythian empire, although this determination can only refer to a considerably later time than the first appearance of the Scythians on the Indus.

Indo-Scythia embraces, with Ptolemy (VII, 1), the following provinces:—In the direction nearest to the south and the east, Surashtra or the Peninsula Guzerat; then the delta of the Indus or Pattalene; further the country Abiria,* situated above it; he includes in the Scythian empire a small district, and some towns on the eastern bank of the river; most of them lie however on the western bank. How far up the Indus the Scythian dominion extended, is not quite evident; but Artoartar, above held by us to be a Scythian town, is mentioned as situated in the near

* This, and not Sabiria, is to be read, any more than Iberia in the Periplus. They are the Abhira of Indian geography. De Pentap. Ind. p. 28. The passage in Periplus p. 24, must perhaps be written: Ταύτης τὰ δὲ μὲν μεσόγεια τῆς Σκυθίας Ἀβηρία καλεῖται, τὰ δὲ παραθαλάσσια Συνραστρήνη for Ἰβηρία, καλεῖται δὲ τὰ κ. τ. λ. The delta of the Indus is ascribed to the Scythians in the following passage of the Periplus, p. 22, on the emporium on the mouth of the Indus: πρόκειται δὲ αὐτοῦ νησίον μικρόν· καὶ κατὰ νώτου μεσόγειος ἡ μετρόπολις, αὐτῆς τῆς Σκυθίας Μινναγάρ. βασιλεύεται δὲ ὑπὸ Πάρθων, συνεχῶς ἀλλήλους ἐκδιωκόντων.

neighbourhood of Peshawur. Hence it follows, that Indo-Scythia at that period, or rather a little earlier than Ptolemy, included Peshawur, the country on both banks of the Indus from Attock to its mouth, and Guzerat. The Punjab did not belong to it, as the Kaspireans occupied this province, as well as the country up to the Jumna and Vindhia,* neither did Barygaza. The mountains to Arachosia, and the desert on the eastern bank of the river form the other boundaries.

It is therefore evident, that this empire is very small in proportion to what Azes claims on his coins.

We rather have in the limited extent above stated, a dissolved Indo-Scythian empire before us. The Periplus partly explains this decline of the Indo-Scythian power by mentioning that the capital, Minnagar, was in the writer's time in the possession of the Parthians, and that both nations continually expelled one the other.

Let us now inquire into Parthian history, whether it yields us some illustrations.

From our examinations, above effected, of the relations of the Parthians to the Scythians, it resulted, that since the arrival of the Scythians in Bactria and Segistan, to the year 37 B. C. no report shows that the Parthians had regained such ascendancy over the Scythians as to rise against them as conquerors. The same refers also to Artaban III. (died 41 A. D.), who more than once must have had recourse to the Scythians in the north. There is least of all any trace that Vonones I. during his short and troubled reign, may have made the conquest in the east, which we must ascribe to him, if the coins, above mentioned, belonged to him.

Of Bardanes (died 47) a successful campaign is mentioned against the Dahes. What we know of his successor Gotarzes (died 50) does not entitle us to attribute to him any new aggrandisement of the Arsacidian empire. Then come we to Vonones II. who reigned but a few months; after him to his son Volagases. His reign was a long and happy one,† and

* μέχρι Οὐινδίου ὄρους and because Μόδουρα ἡ τῶν θέων therefore Mathura belonged perhaps to the Kaspireans.

† 50—85. A. D. Visconti, Iconogr. III. p. 173.

though he was neither indolent nor of unwarlike disposition, yet he lived in peace with the Romans. It is therefore also on the authority, though only implied, of history, that we assign to his reign the conquests of the Parthians in Cabul, of which the coins with the names of Vonones and Volagases bear witness.* Nor do we think ourselves mistaken in tracing from this settlement in Cabul the Parthian irruptions into India, mentioned in the Periplus.

The circumnavigator of the Erythræan sea tells also of these inroads as an eye-witness, in which will be discovered another reason against placing him so low as the era of Augustus.

Be it as it may, if Azes be taken for the successor of Vonones, and therefore of Volagases, he is placed in so late a period, that the close resemblance of his coins with Grecian patterns is quite inexplicable. Considering the extent of the countries which are under the sway of Azes, no other has a juster title to be identified with him than the Yankaotching of the Chinese annals. The time would correspond, as we have to look according to those accounts, for the flourishing power of the Yuetchis just in the years 20—50. (A. C.)

Two facts, however, are at variance with this view. First, the difference of the name, too palpable even for Chinese corruption of sounds, and then, that of the coins.

They are so closely allied to Greek types, that we must connect Azes immediately with the Greeks, and in this case we must likewise expect coins of Indo-Scythian kings who preceding Azes, existed between his time and that of the Greeks, and of this description we found only Mayes. Nor does our numismatological guide, M. Raoul-Rochette doubt in the least as to this earlier era, and accordingly places him immediately after Hermaios (II. 42).†

But if Azes reigned so early, he belonged to the Saces, and not to the Yuetchi. This supposition is supported by the figure of a horseman, which he adopts on his coins; for the equestrian

* Lastly, Volagases I. has styled himself "the just," as the Cabulian. Mionnet VIII. 448. Vonones I. does not bear this epithet.

† II. 42.

coins come from Kipin, where the Saces, and not the Yuetchis, had settled themselves.

Now it is true we have not observed that the Saces as well as the Yuetchis have made any conquests in India; but it seems to follow, first, from the fact, that the empire of Hermaios apparently was on the eve of its destruction at the very time (120 B. C.) to which we may assign the inroads of the Saces in India, immediately after 126 B. C.: secondly, because the capital of the Scythian empire of a later time, was named Min,* and as this name occurs in Sakastane itself, it must have come thence, and not by means of the Yuetchis to the Indus. It would be, lastly, implied in the Chinese chronology, if correctly translated,† that the Yuetchis reconquered India; and before them, who but the Saces in Kipin could have conquered it? However little confidence we can put on these discussions, yet we must at once adopt the supposition, that the empire of Azes existed about 100 B. C.

Azilises declared himself as successor of Azes; as the Chinese mention two names of these kings of Kipin, we shall perhaps in time obtain coins of theirs, by which the era of Azes may be determined with greater certainty.‡ The coins above described, can only be hypothetically taken for the coins of such successors of Azes.

If Azes, however, be considered as the founder of an empire of the Saces in India, either Kadphises or the nameless Soter-Megas, must be held as the great conqueror under the Yuetchis.

Among them the king last mentioned appears to have most claims, in virtue of the remark, already made, that he seems to have founded a new dynasty, which was established from Bactria in Cabulistan and the Punjab, and again assuming the

* Nagara, Sanscrit town; Μὶν πόλις in Sakastane with Isidor, p. 9. De Pentap. Ind. p. 56.

† As. T. VI. p. 63.

‡ I would even conjecture, that Ontheoulao was Azilises, if I were persuaded that the Chinese express a Z by th. They place him 87 B. C., and this statement is indeed in a striking manner corresponding with the place given by the coins to Azilises.

name Soter of the Greek kings, maintained itself up to the period of the Parthian relations with India.

The monogram of the nameless king, and the epithet of *deliverer*, recurs as well on the coins of Kadphises as on those above described; it occurs last on those of the Kanerkis. Azes has not this monogram;* it seems therefore to be the monogram of the Yuetchis. In all of them are probably to be recognized successors of the nameless king of the Yuetchis, but it remains doubtful, how we have to place them before and after the Parthian epoch of those provinces, and whether they succeeded to the same throne, or reigned at the same time in neighbouring countries.

Ptolemy's description of Indo-Scythia, like that in the Periplus, shows a smaller Scythian empire on the Indus, together with which more than one kingdom may have subsisted in western Cabulistan. The author of the Periplus mentions besides those, an independent kingdom of the very warlike Bactrians (p. 27); the Yuetchis alone can be understood by this. These intimations point to a Scythian monarchy in a dismembered condition at the period to which they refer.

We may assign Yndopherres with more confidence to the Parthian period. On a general view we run no risk of ascribing Kadphises, the Parthians, and Yndopherres, to the last half of the first century (A. D.), but to give more exact definitions would be too dangerous.

Lastly, the Kanerkis, who are allied to Kadphises, and who are the last of these leaders of hordes, probably belong to the commencement of the second century; but they rather represent a new horde of the Yuetchis, advanced from Bactria, than a direct continuation of the former hordes, for they are distinguished from them, as well as Kadphises from still earlier tribes, by his position, represented as going in a carriage, while previously to him the Scythian kings were represented as horsemen. The Yuetchis are indeed said to have ridden in a carriage, however it is added, in one drawn by oxen.

We have already observed, that the Chinese identified the end of the power of the Yuetchis in India with the beginning of the

* R. R. II. p. 48.

Sassanians, and we have had no reasons to assign to the Kanerkis a later period. If they be referred to a later date, they must be "the Little Yuetchis," who founded a new empire in Gandhara in the fifth century, but such a great interval between Kadphises and the Kanerkis would hardly be admitted.

Other monuments seem to belong to "the Little Yuetchis," on an examination of which we cannot however enter. The history, like that of the Sassanians in Cabul, of the white Huns in India, mentioned by Cosmos, and lastly of the Murundas, of whom Indian inscriptions from the Sassanian time bear witness, would require new preparations far beyond the scope of this essay.

Here we shall therefore add only this, that Fahian being in the year 400 in these countries, mentions the power of the Yuetchis as having passed away (S. Foe. K. p. 766.)

If we be not mistaken, the inquiry leads without compulsion to the probable result, that between the empire of Azes and the renewed power of the Scythians under the king of the Yuetchis, an interval took place in the dominion of the countries on the Indus. This has been already previously* deemed to be a corroboration of the Indian account, according to which the epoch of Vikramaditya, which commences with the year 56 B. C. was founded on the occasion of a victory over the Saces gained by this king. In this case Indian tradition, which may certainly adduce in its favour the use still existing, and to be traced to a very early period, of counting from that epoch, would be in perfect correspondence with what has been the result of our inquiry into the Scythian history. Vikramaditya reigning in Ujjajini, and therefore a direct neighbour of the Scythian empire, which under Azes extended to the boundaries of Malwa, would, on this supposition, have repelled the successors of Azes to the Indus. After Vikramaditya we hear nothing of the empire in Ujjajini, and this silence finds its explanation in the growing power, soon after the commencement of our era, of the Yuetchis, whose kingdom Ptolemy described as still extending

* As. T. VI. p. 63.

on the Indus to Guzerat. By this power Malwa must accordingly have been confined to narrow limits.*

It would be rather imprudent to venture any conjecture on the distribution of the countries on the Indus and Cabul among

* Having given this explanation, I leave it to the judgment of the reader, whether there be a reason in the account of the Periplus, of the empire of the Indo-Scythians, to bring down, according to the view of M. K. O. Mueller, by some centuries, the epoch of Vikramaditja. If he takes the Vikramaditja, now known to us by old Indian coins, for the real conqueror of the Scythians, his choice is evidently very unfortunate, as this king belongs to the dynasty of the Guptas in Kanôje, contemporaneous with the Sassanians. If there be any correspondence in the accounts on Vikramaditja, it is, that he reigned in Ujjajini. I have already discovered a reference to the empire of Vikramaditja in the passage of the Periplus on the Ozene, viz. that the ancient royal residence was there (de Peutap p. 57), being at that time in a very declining state; and I have no reason whatever to change my view there set forth. It is well known, that Vikramaditja afterwards became the hero of a great number of fabulous tales; he has become the Carolus Magnus of Indian poetry, and is as far removed from firm historic ground as Carolus Magnus would be if we had to take our information of him merely from the chivalrous novels; but for Vikramaditja, save poetry, no prose, on chronicle, has been preserved to us. The early adoption of the epoch of Vikramaditja by the ancient astronomers, might be here of far greater importance than all those tales from which Wilford has endeavoured to construe a history of Vikramaditja, and of the second founder of an Indian epoch, Salivahana. To render complete this confusion, it must be added, that the name was afterwards often adopted by Indian kings; one of them seems even to have waged war with the Scythians. The annalist of Kashmir, who had, so to say, sufficiently respectable authorities, is doubtful whom of two Vikramaditjas he must take for the real Sakari (enemy of the Saces) Raj. Tar. II., 5. III, 125. He decides himself on the second, (not to put down the epoch, which is clear to him) but because in order to follow the Cashmerian chronology for the Buddhist part of his history, he is necessitated to carry back some centuries all ancient dates, and even to admit afterwards a great gap in the series of the kings. We must therefore accede, contrary to the view of the annalist, to the opinion represented as the common one, in holding the first Vikramadijta as the founder of the epoch. It is now a curious fact, that between him and the second, the reigns numbered together, fill out 286 years. The second reigning 236 A. D. would coincide with the end of the Yuetchi empire and the commencement of the Sassanians, it is therefore probably founded on a historic date, if the second Vikramaditja is likewise represented as fighting with the Saces.

the different dynasties of the Scythians and Parthians, as neither historic accounts assist us, nor are the coins so completely put together, and explained, that the several families can be properly arranged. This is perhaps a fact, that a frequent change of dynasties happened, and a speedy decomposition of the greater into smaller kingdoms. This fact is supported by the nature of those countries, the lawless manners of the nations, and the analogy of Turkish and Mogul history.

Another part of the history of these Scythians is left in the dark. The Chinese annals describe to us the Yuetchis as zealous Buddhists, hence rises the question, whether there still exist with the Yuetchis monuments of this religion.*

We can now take it for granted, that from Azôka's period Buddhism was widely diffused through Cabul; the fathers of the Church also know the Samaneans in these countries;† and the Chinese pilgrims as eye-witnesses, speak, of the great number of Buddhist cloisters and monuments found there; Buddha images are likewise lately dug out in Cabul itself. There is accordingly no want of Buddhist monuments, but it is the question, whether we must attribute them to the Yuetchis.

We must here refer to the coins, and one class of them, that of Behat, must indeed be considered as Buddhist. However it is only probable that those with duplicated legends belong to a Scythian dynasty, but to this are limited the Buddhist numismatological monuments of the Yuetchi kings; and of Azes, Kadphises, the Kanerkis, no really Buddhist coin has been discovered. It must therefore be left undecided, whether the Chinese reports did transfer to all Yuetchis what was only correct to maintain as of a part of them.‡ But while I must leave this point undecided, I am reminded at the same time that I have given all that from the examination of the coins appears to

* Thus the passage, As. T. VI. 63. At the period when all these kingdoms belonged to the Yuetchi, the latter put their kings to death, and substituted military chiefs. They enjoined all their people to practise the doctrine of Fuh-too-chi.

† See my treatise, in the Rhenish Museum, for Philology, 1832. vol. I., p. 171.

‡ From Professor Ritter's book, the Stupas, etc. Berlin, 1838, which I received when printing my book, I fully understood his view on those monuments, and its reasons. I am sorry to say, that I cannot be persuaded into the Buddhist origin of the topes. I have already above separated

me a certain or a probable result. The field of conjecture is already too richly cultivated, for me to add arbitrarily to what has been done therein. In conclusion, I shall sum up in a table the historic results of my investigation. I need hardly tell the reader, that although in the table the facts are placed together with apparent claim to equal authenticity, they occupy in the book itself, and in reality, all the different places which on a large scale are intermediate between certainty and conjecture in its various degrees, according to individual views.

Separation of Bactria from Syria under,

Theodotos I. soon before	256 B. C.
Theodotos II. his son and successor, ...	
Euthydemos expels the family of Theodotos, and himself ascends the throne of Bactria before, ...	209
Concludes peace with Antiochus the Great, 205, makes conquests in Ariana and India after	200
Agathokles founds an empire in eastern Cabul, about	190
Demetrios succeeds his father in Bactria, about ..	185
Eukratides takes possession of Bactria. Demetrios maintains himself in Arachosia, ..	175
Pantaleon succeeds Agathokles, ...	170
Eukratides dethrones Demetrios, and conquers the Indian empire of Pantaleon, about ..	165

the inquiry into the nature of the topes, from the examination of the coins, and postponed it to another time; I maintained at the same place, that as yet no Buddhist coins had been discovered in the topes. Mr. Ritter on the contrary states, that they are met with (p. 207). But he erroneously says, that Mr. Prinsep has recognised among the coins from Manikyala some Buddhist; in the passages quoted he certainly mentions nothing of this kind. Then continues Mr. Ritter (p. 238) "As we now possess ascertained chronological determinations of the Buddhist religion in the Mokadphise's, Kanerki's, and Azes' coins." The four Buddhist coins alluded to by Mr. Ritter, occur As. T. III. pl. XXII. No. 28. till No. 32. They are coins of the Kanerki dynasty, therefore Mithra gods on Buddhist coins? Then III. pl. XXVI. No. 2, No. 3, IV. pl. XXII. No. 12, No. 13, or with him plate VIII. No. 2—4. Therefore Siva on the obverse, while Azes is represented as Buddha seated on the reverse? If Mr. Ritter does not know any other coins out of the topes which escaped my knowledge, I shall not be necessitated to give up my previous assertion, which was here my only purpose to vindicate.

Foundation of a Grecian empire in Drangiana by Antimachos, about 165
Murder of Eukratides by his son, about 160
His son (Heliokles) succeeds him in Bactria, Antialkides founds an empire in Arachosia and western Cabul, Menandros a large kingdom in India, after .. 160
Philoxenos succeeds in Drangiana, Lysias in Arachosia, afterwards Apollodotos in India, Archelios and Amyntas succeed in the western empires, ...
Mithridates I. of Parthia, conquers Drangiana about 145
Destroys the Grecian-Bactrian kingdom, 139
Succession of Diomedes, Agathokleia and Hermaios in the Greco-Indian empire to 120
Inroads of the Saces and Tochares in Bactria .. 126
The Saces occupy Drangiana, the Tochares Bactria, the Grecian empire of Hermaios subverted by Kadaphes about .. 120
Great empire of the Saces under Azes after .. 116 B. C.
Azilises his son, succeeds about, ... 90
Expulsion of the Saces from the Indus countries by Vikramaditya king of Malwa .. 56
Division of the empire of the Saces, ...
Khieoutsieouhi unites the tribes of the Tochares, and conquers the possession of the Saces after 40 B. C.
Yenkaotching his son, makes great conquests in India about .. .. 20 A. D.
Under Volagases conquests of the Parthians in Cabul, and inroads into the countries on the Indus, after 50
Kadphises' empire on the Indus and in Upper India to the Ganges, the dynasty of the Kanerkis succeeds in his empire, 100
Downfall of the Arsacians in Parthia, conquests of the Sassanians in Cabul; restoration of Indian power in Upper India by the dynasty of Kanoja, after 226

A

KEY

TO

PROFESSOR H. H. WILSON'S

SYSTEM OF TRANSLITERATION

AS MODIFIED BY THE

SYNDICATE OF THE CALCUTTA UNIVERSITY,

AND ORDERED TO BE ADOPTED IN UNIVERSITY PROCEEDINGS AND RECORDS.

THE object of the following pages is to offer to the teachers and pupils of public Colleges and Schools a key to the system lately adopted by the Syndicate of the Calcutta University for the representation of Indian words and proper names in the Roman character.

Such a system was greatly needed. The rules of the University require that a number of registers of names should be kept and published from time to time in the Roman character, and for the sake of convenience it is directed that several of these should be alphabetically arranged. But owing to the very irregular and unsystematic way in which the names are generally spelt, the same name being often most capriciously rendered in several different ways, much confusion is found to exist, and the object of the alphabetical arrangement is in a great measure frustrated. Similarly in the different departments of Government many registers have now to be kept, and their usefulness is very much impaired by the

same cause. Considerable difficulty is also met with in the writting of vernacular terms and names of Indian books with orthographical accuracy from the want of a system of transliteration known to all and common to all parts of the country. Occasionally the systems of Sir William Jones and of Gilchrist are resorted to, but a want of uniformity prevails in practice and a general disregard of all fixed rules of spelling, so that it is rare to find a reasonably faithful reproduction of the vernacular orthography in an English dress.

The adoption of a fixed system by the Calcutta University and the Education Department in Bengal will have the effect, it is hoped, of gradually securing a general uniformity of spelling throughout the country in public documents of all kinds and in literary productions, as well as in the ordinary communications of common business and the intercourse of private life.

The following tables give the Roman equivalents which are to be used for the letters of the Indian alphabets.

The Sanskrit and Bengali Alphabets, with their Roman Equivalents.

Sanskrit.	*Bengali.*	*English.*	
		Complete form.	Optional form.
क	ক	k	k
ख	খ	kh	kh
ग	গ	g	g
घ	ঘ	gh	gh
ङ	ঙ	ṅ	n
च	চ	ch	ch
छ	ছ	chh	chh
ज	জ	j	j
झ	ঝ	jh	jh
ञ	ঞ	ṇ	n
ट	ট	ṭ	ṭ
ठ	ঠ	ṭh	th
ड	ড	ḍ	d
ढ़	ড়	ṛ	r
ढ	ঢ	ḍh	dh
ढ़	ঢ়	ṛh	rh
ण	ণ	ṇ	n
त	ত	t	t
थ	থ	th	th
द	দ	d	d
ध	ধ	dh	dh
न	ন	n	n
प	প	p	p
फ	ফ	ph	ph
ब	ব	b	b
भ	ভ	bh	bh

Sanskrit.	*Bengali.*	*English.*	
		Complete form.	Optional form.
म	ম	m	m
य	য	y	y
र	র	r	r
ल	ল	l	l
व	ব	v	v
श	শ	ś	s
ष	ষ	sh	sh
स	স	s *	s
ह	হ	h	h
अ	অ	a	a
आ	আ	á	á
इ	ই	i	i
ई	ঈ	í	í
उ	উ	u	u
ऊ	ঊ	ú	ú
ऋ	ঋ	ṛi	ṛi
ॠ	ৠ	ṛí	ṛí
ऌ	ঌ	ḷi	ḷi
ॡ	ৡ	ḷí	ḷí
ए	এ	e	e
ऐ	ঐ	ai	ai
ओ	ও	o	o
औ	ঔ	au	au
. .	ঁ	ñ	ñ
:	ঃ		ḥ

The Urdú, Persian, and Arabic Alphabets with their Roman Equivalents.

Arabic, &c.	*English.*		*Arabic, &c.*	*English.*	
	Complete form.	Optional form.		Complete form.	Optional form.
ا	a	a	ر	r	r
آ	á	á	ڑ	ṛ	r
اِ	i	i	ڑھ	ṛh	rh
اِی	í	í	ز	z	z
اُ	u	u	ژ	zh	zh
اُو	ú	ú	س	s	s
پ	b	b	ش	sh	sh
بھ	bh	bh	ص	ç	ç
پ *	p	p	ض	ẓ	z
پھ	ph	ph	ط	ṭ	t
ت	t	t	ظ	ẓ	z
تھ	th	th	ع*		
ٹ	ṭ	t	غ	gh	gh
ٹھ	ṭh	th	ف	f	f
ث	s̱	s	ق	q	q
ج	j	j	ک	k	k
جھ	jh	jh	کھ	kh	kh
چ	ch	ch	گ	g	g
چھ	chh	chh	گھ	gh	gh
ح	ḥ	h	ل	l	l
خ	kh	kh	م	m	m
د	* ḍ	d	ن	n	n
دھ	ḍh	dh	و	w o u	w o u
ڈ	ḍ	d	ہ	h	h
ڈھ	ḍh	dh	ي	y i í e†	y i í e
ذ	ẕ	z			

* To be indicated by the vowel with which it may be associated with an apostrophe placed before it: when not associated with a vowel, the apostrophe alone should be its symbol.

† The letter *y* represents ي when ي is a consonant; *e. g.*, Kifáyat.

In carrying out this system, the following rules are to be carefully observed.

I. Every Indian letter is to be represented by its fixed Roman equivalent, except in the writing of proper names when the following exceptions are to be observed:—

1. অ final is to be omitted after single consonants, when not sounded.

2. The initial য is to be represented by j and not by y.

3. The initial জ is to be represented by g and not by ja.

4. খ is to have for its equivalent kh in the case of Bengalis, and chh in the case of Hindustanis.

5. The initial ব in Bengali names is always to be represented by b and not by v.

6. The Arabic article ال *al* is to be written phonetically, according to the sound which it assumes with reference to the letters which follow it, making the article together with the words amidst which it is placed into one word, as *'Abd-ur Rahmán*, for *'Abda-al-Rahmán*.

II. The Roman vowels a, e, i, o, u, are to have the powers which they enjoy in most European languages, especially in Italian, but not in English, and are to be used as the equivalents of the Indian vowels অ, এ, ই, ও, উ, respectively.

1. A stands for অ, and should generally be pronounced in Indian words as *a* in *ball*, never as *a* in *bat* or *father* or *bade*.

2. E is the equivalent of এ, and should be sounded as *a* in *made* never as *e* in *be*.

3. It is the equivalent of ই, and should be sounded as *i* in *bit*, never as *i* in *bite*.

4. O should always be sounded long as *o* in *no*, never as *o* in *not*.

5. U should invariably stand for the Indian short vowel উ, and sounded as *u* in *put*, never as *u* in *but*.

III. The long vowels are to be represented by accents on the short vowels.

1. आ is to be represented by a, with an acute accent over it (á), which should be read as *a* in *father*. Thus राम should be written Ráma, and रमा, Ramá.

2. The long ई is invariably to be represented by i accented (í), never by ee or ea, and should be pronounced as *i* in *police*.

3. ऊ is to be represented by u accented (ú), and never by oo.

4. The Indian ऐ is to be represented by ai, and never by oy, as is commonly done.

5. The औ is to be represented by au, never by ou.

IV. In transcribing Arabic, Persian, and Urdú, the following general rules should be attended to:—

1. The *zabar*, *zer*, and *pesh*, associated with consonants, are to be respectively represented by *a*, *i*, and *u*.

2. When they are associated with ا, و, or ي, they are to be represented by *á*, *ú*, *í*.

3. The *zabar* with a following و makes the diphthong *au*, and with a ي, *ai*.

4. The *zer* with a following ي (*majhúl*) is to be represented by *e*.

5. The *pesh* with a following و (*majhúl*) is to be represented by *o*.

6. The *alíf maqṣúrah*, ى, is to be represented by *á*.

7. ع is to be represented by the vowel with which it is associated with an apostrophe before it. Thus, عماري should be written 'imárí; عاشق, 'áshiq; عيب, 'aib; عورت, 'aurat; عيد, 'id; عمارت, 'imárat; عمدہ, 'umdah, &c. When ع is final or unassociated with a vowel, it is to be represented by an apostrophe only, thus, رفع raf', دفع daf', معتمد mu'tamid, مشعّث musha'as, &c.

V. Two vowels coming together, but not uniting into a diphthong, are to be separated by a diæresis (..).

VI. Compound words are to be separated by hyphens, and never to be made into separate words.

VII. For unwritten languages a purely phonetic system must necessarily be followed, and a letter or a combination of letters should be used for each distinct sound, but the Roman vowels should never be used except to represent sounds indicated in rules II. and III.

VIII. The diacritical marks attached to the consonants may, at option, be omitted in the writing of proper names, except in the case of ñ (anusvára) and ç (ص); but the accents on the long vowels should invariably be inserted, as they are absolutely necessary for intelligible pronunciation.

The following lists of family and personal names commonly current in Bengal afford examples of the application of the rules, which learners will find useful. They will often be convenient also for general reference.

The optional form is used.

Hindu Family Names and Titles used as Family Names.

English.	Bengali.
A	
Á́chárya	আচার্য্য
Á́dak	আদক
Adhikárí	অধিকারী
Á́dhya	আঢ্য
Á́ditya	আদিত্য
Á́ich	আইচ
Ankur	অঙ্কুর
Á́ntárí	আন্তাড়ী
Á́rajbegí	আরজবেগী
Á́rat	আড়ত
Á́s	আস
B	
Bág	বাগ
Bágchi	বাগ্‌চি
Baksi	বক্সি
Báliyál	বালিয়াল
Ballabh	বল্লভ
Bán	বাণ
Bandaranáyak	বন্দরনায়ক
Bandhu	বন্ধু
Bandyopádhyáy, (Banurji)	বন্দ্যোপাধ্যায়
Bar	বর
Barát	বরাট
Bardhan	বর্দ্ধন
Barmá	বর্ম্মা
Bárik	বারিক
Baruyá	বরুয়া
Báruí	বারুই
Basák	বসাক
Basu	বসু
Batavyál, Barál	বটব্যাল, বড়াল
Bej	বেজ

Hindu Family Names and Titles used as Family Names.

Berá	বেরা
Betál	বেতাল
Bhadra	ভদ্র
Bháduri	ভাদুড়ী
Bhakta, Bhakat	ভক্ত, ভকত্
Bhándári	ভাণ্ডারী
Bhanja	ভঞ্জ
Bhar	ভর
Bhatta	ভট্ট
Bhattáchárya	ভট্টাচার্য্য
Bhaumik	ভৌমিক
Bhímakáli	ভীমকালী
Bhúñi	ভুঁই
Bhunjo	ভুঞ্জ
Bhúñrí	ভুঁড়ী
Bhúrisreshtha	ভূরিশ্রেষ্ঠ
Bhúshan	ভূষণ
Bhút	ভূত
Bid, Bída	বিদ, বীদ
Bidánta	বিদন্ত
Bis'árad	বিশারদ
Bishnu	বিষ্ণু
Bisui	বিশুই
Bisvakarmá	বিশ্বকর্ম্মা
Bisvás	বিশ্বাস
Bit	বিট্
Brahma	ব্রহ্ম
Brahmachárí	ব্রহ্মচারী
Byavahartá	ব্যবহর্ত্তা

C

Chák	চাক
Chákí	চাকী
Chakravartí	চক্রবর্ত্তী
Champatí	চম্পটী

Hindu Family Names and Titles used as Family Names.

Cháñd	চাঁদ
Chándáguñrí	চাঁদাগুঁড়ী
Chandra	চন্দ্র
Chár	চার
Chattaráj	চট্টরাজ
Chattopádhyáy, (Cháturji)	চট্টোপাধ্যায়
Chaube	চৌবে
Chongdár	চোঙ্গদার
Chaudhurí, Chaturdhurí	চৌধুরী, চতুর্ধুরী
Chhandáñsi	ছন্দাংশি
Chheñchkí	ছেঁচকী
Chhilimili	ছিলিমিলি

D

Daitya	দৈত্য
Dálál	দালাল
Dalui	দলুই
Dáñ	দাঁ
Dáná	দানা
Dás	দাস
Datta	দত্ত
De	দে
Dev	দেব
Dhál	ঢাল
Dhanvantari	ধন্বন্তরি
Dhar	ধর
Dhárá	ধাড়া
Dharaní	ধরণী
Dhol	ঢোল

E

Eñd	এঁদ

G

Gádhi	গাধি
Gan	গণ
Gangopádhyáy, Gánguli	গঙ্গোপাধ্যায় (গাঙ্গুলী)

Hindu Family Names and Titles used as Family Names.

Garáï	গরাই
Garga	গর্গ
Gargarí	গড়গড়ী
Gáyen	গায়েন
Ghání	ঘানি
Ghantes'varí	ঘণ্টেশ্বরী
Ghariyál	ঘড়িয়াল
Gharui	ঘড়ুই
Ghatak	ঘটক
Ghosh	ঘোষ
Ghoshál	ঘোষাল
Gochhikár	গোচ্ছিকার
Gosvámí, Gosáñí	গোস্বামী, গোঁসাই
Guha	গুহ
Gun	গুণ
Gunda	গুণ্ড
Guñí	গুই
Guñrí	গুঁড়ি
Guñta	গুঁত
Gupta	গুপ্ত
Gur	গুড়
Gure	গুড়ে

H

Háïṛ	হাইড়
Hájará	হাজরা
Háldár	হালদার
Háñs	হাঁস
Har	হড়
Hátuï	হাটুই
Hájári	হাজারী
Hút	হুত

J

Jáná	জানা
Jar	জড়
Jas	যশ

Hindu Family Names and Titles used as Family Names.

Jásu	যাসু
Jumlánási	জুমলানাশি

K

Kach	কচ
Kale	কলে
Kán	কাণ
Káñdu	কাঁদু
Kánjilál	কাঞ্জিলাল
Káñpá	কাঁপা
Kanthábharan	কণ্ঠাভরণ
Káñule	কাঁউলে
Kántungo	কানুনগো
Kar	কর
Kárapharmá, Kátma	কারকর্ম্মা, কাটমা
Karárí	কররী
Karmakár, Kámár	কর্ম্মকার, কামার
Kástagiri	কাস্তগিরি
Kauri	কৌড়ী
Kavibhúshan	কবিভূষণ
Kaviratna	কবিরত্ন
Kavisekhar	কবিশেখর
Kayál	কয়াল
Keñu	কেঁউ
Keráni	কেরানি
Khájánchí	খাজাঞ্চী
Khák	খাক
Kháñ	খাঁ
Khañná	খাঁনা
Khánsámá	খানসামা
Kháváś	খাওয়াস
Koñch	কোঁচ
Koñrá	কোঁড়া
Kulál	কুলাল
Kularí	কুলড়ী
Kumbhakár	কুম্ভকার

Hindu Family Names and Titles used as Family Names.

Kuñár, Kumár	কুঁয়ার (কুমার)
Kunda	কুণ্ড
L	
Láhá	লাহা
Láhirí	লাহিড়ী
Lankáá	লঙ্কা
M	
Mahalánavís	মহলনবীশ
Mahápátra	মহাপাত্র
Mahásay	মহাশয়
Máiti	মাইতি
Maitra	মৈত্র
Máji	মাজি
Majumdár	মজুমদার
Malik	মালিক
Mallik	মল্লিক
Mandal	মণ্ডল
Mangal	মঙ্গল
Mánná	মান্না
Már	মাড়
Másánta	মাসান্ত
Máti	মাটী
Matilál	মতিলাল
Maulik	মৌলিক
Maurí	মৌড়ী
Mete	মেটে
Meur	মেউর
Misra	মিশ্র
Mitra	মিত্র
Modak, Mayará	মোদক, ময়রা
Mukhopádhyáy, (Mukhurji)	মুখোপাধ্যায়
Munsí	মুন্সী
Mustaphí	মুস্তফী
N	
Nád	নাদ

Hindu Family Names and Titles used as Family Names.

Nág	নাগ
Nái	নাই
Nán	নান
Nandan	নন্দন
Nandanavási	নন্দনবাসী
Nandí	নন্দী
Naskar	নস্কর
Náth	নাথ
Náyak	নায়ক
Niyogí	নিয়োগী
O	
Ojhá	ওঝা
Osh	ওষ
P	
Páík	পাইক
Páín, Pán	পাইন, পান
Pákrásí	পাকড়াশী
Pál	পাল
Páladhi	পালধি
Pálamal	পালমল
Palasáñi	পলসাঁই
Pálit	পালিত
Pandit	পণ্ডিত
Páñjá	পাঁজা, পাঞ্জা
Panjáb	পঞ্জাব
Páñre	পাঁড়ে
Parán	পরাণ
Parel	পড়েল
Páthak	পাঠক
Patitunda	পতিতুণ্ড
Patnáyak	পটনায়ক
Patranavís	পত্রনবীস
Phukkan	ফুক্কন
Pippalí	পিপ্পলী
Piri	পিরি

Hindu Family Names and Titles used as Family Names.

Pitrí	পিতুড়ী
Podará	পোদ্দার
Poddár	পোদ্দার
Poñrá	পোঁড়া
Prámánik, Parámánik	প্রামানিক, পরামানিক

R

Ráhá	রাহা
Ráj	রাজ
Rakhit	রক্ষিত
Ráná	রাণা
Rás	রাস
Rasun	রশুন
Ráüt	রাউত
Ráy	রায়
Rudra	রুদ্র
Rudravágchí	রুদ্রবাগ্‌চী

S

Sádhu	সাধু
Sádhukhán	সাধুখাঁ
Sádhuvágchi	সাধুবাগ্‌চী
Sáhá	সাহা
Samáddár	সমাদ্দার
Sámanta	সামন্ত
Samájapati	সমাজপতি
Sámui, Sáñpuï	সামুই, সাঁপুই
Sáná	সানা
Sánáï	সানাই
Sánati	সানতি
Sáñi	সাঁই
Sáñtará	সাঁতরা
Sár	সার
Sarakhel	সরখেল
Sarasvatí	সরস্বতী
Sardár	সর্দার
Sarkár	সরকার

Hindu Family Names and Titles used as Family Names.

Sarmá	শর্ম্মা
Sarvádhikárí	সর্ব্বাধিকারী
Sástrí	শাস্ত্রী
Satapati, S'atapathí	শতপতি, শতপথী
Sau	সৌ
Savár	সবার
Sen	সেন
Senánáyak	সেনানায়ক
Senápati	সেনাপতি
Set, Sreshthí	শেট, শ্রেষ্ঠী
Sí	শী
Sikdár	শিকদার
Sil	শিল
Siñha	সিংহ
Sít	শীট
Som	সোম
Srimáni	শ্রীমাণী
Sukla	শুক্ল
Sukul	সুকুল
Súr	শূর

T

Táïd-navís	তাইদ-নবীস
Talá-pátra	তলা-পাত্র
Tán	টান
Taraphdár	তরফদার
Tát	টাট
Tej	তেজ
Tevárí	তেবারী
Thakúr	ঠাকুর
Topdár	তোপদার
Tripáthí	ত্রিপাঠী

U

Ukíl	উকীল
Upádhyáy	উপাধ্যায়

Hindu Family Names and Titles used as Family Names.

BENGALI.	ENGLISH.
	অ
অঙ্কুর	Aṅkur
অধিকারী	Adhikárí
	আ
আইচ	Aïch
আচার্য্য	Áchárya
আড়ত	Árat
আঢ্য	Ádhya
আদক	Ádak
আদিত্য	Áditya
আন্তাড়ী	Ántárí
আরজবেগী	Árajbegí
আস	Ás
	উ
উকীল	Ukíl
উপাধ্যায়	Upádhyáy
	এ
এঁদ	Eñd
	ও
ওঝা	Ojhá
ওষ	Osh
	ক
কচ	Kach
কণ্ঠাভরণ	Kanthábharan
কয়াল	Kayál
কর	Kar
কররী	Kararí
কর্ম্মকার (কামার)	Karmakár, (Kámár)
কলে	Kale
কবিভূষণ	Kavibhúshan

Hindu Family Names and Titles used as Family Names

কবিরত্ন	Kaviratna
কবিশেখর	Kavísekhar
কাঁউলে	Káñúle
কাঁদু	Káñdu
কাঁপা	Káñpá
কাঞ্জিলাল	Kánjilál
কাণ	Kán
কানুনগো	Kánungo
কারফর্ম্মা, কাট্‌মা	Kárupharmá, Kátmá
কাস্তগিরি	Kástagirí
কুঁয়ার, কুমার	Kuñár, Kumár
কুণ্ড	Kunda
কুম্ভকার	Kumbhakár
কুলড়ী	Kularí
কুলাল	Kulál
কেঁউ	Keñu
কেরানি	Keráni
কোঁচ	Koñch
কোঁড়া	Koñrá
কৌড়ী	Kaurí

খ

খাঁ	Kháñ
খাঁনা	Kháñna
খাওয়াস	Kháwás
খাক	Khák
খাজাঞ্চী	Khájánchí
খান্‌সামা	Khánsámá

গ

গঙ্গোপাধ্যায়, গাঙ্গুলী	Gangopádhyáy, Gángulí
গড়গড়ী	Gargarí
গণ	Gan
গরাই	Garái
গর্গ	Garga
গাধি	Gádhi

Hindu Family Names and Titles used as Family Names.

গায়েন	Gáyen
গুঁই	Guñí
গুঁত	Guñta
গুড়	Gur
গুড়ী	Guñrí
গুড়ে	Gure
গুণ	Gun
গুণ্ড	Gunda
গুপ্ত	Gupta
গুহ	Guha
গোচ্ছিকার	Gochhikár
গোস্বামী, গোসাঁই	Gosvámí, Gosáñí

ঘ

ঘটক	Ghatak
ঘড়িয়াল	Ghariyál
ঘড়ুই	Gharui
ঘণ্টেশ্বরী	Ghantesvarí
ঘানি	Ghání
ঘোষ	Ghosh
ঘোষাল	Ghoshál

চ

চক্রবর্ত্তী	Chakravartí
চট্টরাজ	Chattaráj
চট্টোপাধ্যায়	Chattopádhyáy, (Cháturji)
চন্দ্র	Chandra
চম্পটী	Champatí
চাঁদ	Cháñd
চাঁদাগুঁড়ী	Chándáguñrí
চাক্	Chák
চাকী	Chákí
চার	Chár
চোঙ্গদার	Chongdár
চৌধুরী, চতুর্দ্ধুরী	Chaudhurí, Chaturdhurí
চৌবে	Chaube

Hindu Family Names and Titles used as Family Names.

	ছ
ছন্দাংশি	Chhandáñsi
ছিলিমিলি	Chhilimili
ছেঁচকী	Chheñchkí
	জ
জড়	Jar
জানা	Jáná
জুমলানোশি	Jumlánási
	ট
টাট	Tát
টান	Tán
	ঠ
ঠাকুর	Thákur
	ড
ডল	Dhal
ঢোল	Dhol
	ত
তরফদার	Taraphdár
তলাপাত্র	Talápátra
তাইদনবীস	Táïdnavís
তেজ	Tej
তেবারী	Tevárí
তোপদার	Topdár
ত্রিপাঠী	Tripáthí
	দ
দত্ত	Datta
দলুই	Dalui
দাঁ	Dáñ
দানা	Dáná
দালাল	Dálál
দাস	Dás
দে	De
দেব	Dev
দৈত্য	Daitya

Hindu Family Names and Titles used as Family Names.

ধ

ধন্বন্তরি	Dhanvantari
ধর	Dhar
ধরণী	Dharaní
ধাড়া	Dhárá

ন

নন্দন	Nandan
নন্দনবাসী	Nandanvásí
নন্দী	Nandí
নস্কর	Naskar
নাই	Náï
নাগ	Nág
নাথ	Náth
নাদ	Nád
নান	Nán
নায়ক	Náyak
নিযোগী	Niyogí

প

পঞ্জাব	Panjáb
পটনায়ক	Patanáyak
পড়েল	Parel
পণ্ডিত	Pandit
পতিতুণ্ড	Patitunda
পত্রনবীস	Patranavís
পরান	Parán
পলসাঁই	Palasáñi
পাঁজা, পাঞ্জা	Páñjá
পাঁড়ে	Páñre
পাইক	Páïk
পাইন, পান	Päin, Pán
পাকড়াশী	Pákrásí
পাঠক	Páthak
পাল	Pál
পালধি	Páladhi

Hindu Family Names and Titles used as Family Names.

পালমল	Pálamal
পালিত	Pálit
পিতুড়ী	Piturí
পিপ্পলী	Pippalí
পিরি	Piri
পোঁড়া	Poñrá
পোদড়া	Podará
পোদ্দার	Poddár
প্রামাণিক, পরামাণিক	Prámánik, Parámánik
ফ	
ফুক্কন	Phukkan
ব	
বক্সি	Baksí
বটব্যাল, বড়াল	Batavyál, Barál
বন্দরনায়ক	Bandaranáyak
বন্দ্যোপাধ্যায়	Bandyopádhyáy, (Banurji)
বন্ধু	Bandhu
বর	Bar
বরাট	Barát
বরুয়া	Baruyá
বর্দ্ধন	Bardhan
বর্ম্মা	Barmá
বল্লভ	Ballabh
বসাক	Basák
বসু	Basu
বাগ	Bag
বাগচি	Bágchi
বাড়িক	Bárik
বাণ	Bán
বারুই	Báruï
বালিয়াল	Balial
বিট্	Biṭ
বিদ, বীদ	Bid, Bída
বিদন্ত	Bidanta

Hindu Family Names and Titles used as Family Names.

বিশারদ	Bisárad
বিশুই, বিষয়ী	Bisuï, Bisayí
বিশ্বাস	Bisvás
বিষ্ণু	Bishnu
বেজ	Bej
বেতাল	Betál
বেরা	Berá
ব্যবহর্ত্তা	Byavahartá
ব্রহ্ম	Brahma
ব্রহ্মচারী	Brahmachárí

ভ

ভক্ত, ভকত্	Bhakta, Bhakat
ভঞ্জ	Bhanja
ভট্ট	Bhatta
ভট্টাচার্য্য	Bhattácháryа
ভড়	Bhar
ভদ্র	Bhadra
ভাণ্ডারী	Bhándárí
ভাদুড়ী	Bhádurí
ভীমকালী	Bhímakálí
ভুঞ্জে	Bhunje
ভূঁই	Bhúñí
ভূঁড়ী	Bhúñrí
ভূত	Bhút
ভূরিশ্রেষ্ঠ	Bhúrísreshtha
ভূষণ	Bhúshan
ভৌমিক	Bhaumik

ম

মঙ্গল	Mangal
মজুমদার	Majumdár
মণ্ডল	Mandal
মতিলাল	Matilál
মল্লিক	Mallik
মহলানবীস	Mahalánavís

Hindu Family Names and Titles used as Family Names.

মহাপাত্র	Mahápátra
মহাশয়	Mahásay
মাইতি	Máití
মাজী	Mají
মাটী	Mátí
মাড়	Már
মান্না	Mánná
মালিক	Málik
মাসান্ত	Másánta
মিত্র	Mitra
মিশ্র	Misra
মুখোপাধ্যায়	Mukhyopádhyáy (Mukhurji)
মুন্সী	Munsí
মুস্তফী	Mustaphi
মেউর	Meur
মেটে	Mete
মৈত্র	Maitra
মোদক, ময়রা	Modak, Mayará
মৌরী	Mauri
মৌলিক	Maulik
যশ	Jas
যাসু	Jásu
রক্ষিত	Rakhit
রসুন	Rasun
রাউত	Ráüt
রাজ	Raj
রাণা	Ráná
রায়	Ráy
রাস	Rás
রাহা	Ráhá
রুদ্র	Rudra
রুদ্রবাগ্‌চী	Rudravágchí

Hindu Family Names and Titles used as Family Names.

ল

লঙ্কা	Lanká
লাহা	Láhá
লাহিড়ী	Lahirí

শ

শতপতি, শতপথী	Satapati, Satapathí
শরখেল	Sarakhel
শর্ম্মা	Sarmá
শাস্ত্রী	Sastrí
শিকদার	Sikadár
শী	Sí
শীট	Sít
শীল	Síl
শুক্ল	Sukla
শেট, শ্রেষ্ঠী	Set, Ssreshthí
শ্রীমানী	Srimání

স

সবার	Savár
সমাজপতি	Samájapati
সমাদ্দার	Samáddár
সরকার	Sarkár
সরস্বতী	Sarasvatí
সর্দ্দার	Sardár
সর্ব্বাধিকারী	Sarvádhikárí
সাঁই	Sáñi
সাঁতরা	Sáñtará
সাধু	Sádhu
সাধুখাঁ	Sádhukhán
সাধুবাগ্‌চী	Sádhuvágchí
সানতি	Sánati
সানা	Sáná
সানাই	Sánaï
সামন্ত	Sámanta
সামুই, সাঁপুই	Sámui, Sáñpui

Hindu Family Names and Titles used as Family Names.

সার	Sár
সাহা	Sáhá
সিংহ	Siñha
সুকুল	Sukul
সূর	Súr
সেন	Sen
সেনানায়ক	Senánáyak
সেনাপতি	Senápati
সোম	Som
সৌ	Sau

হ

হড়	Har
হাইড়	Háïr
হাজরা	Hájará
হাজারী	Hâjári
হাটু	Hátuï
হালদার	Háldár
হাঁস	Háñs
হুত	Hút

Hindu Personal Names.

A.

Abhayá Charan,	অভয়াচরণ
Achyutánanda,	অচ্যুতানন্দ
Adhar Náth	অধরনাথ
Áditya Charan,	আদিত্যচরণ
Advaita Prakás,	অদ্বৈতপ্রকাশ
Aftáb Chandra,	আফতাবচন্দ্র
Aghor Náth,	অঘোরনাথ
Ahína Chandra,	অহীনচন্দ্র
Akhay Krishna,	অক্ষয়কৃষ্ণ
Akhay Kumár,	অক্ষয়কুমার
Akhil Chandra,	অখিলচন্দ্র
Áloknáth,	আলোকনাথ
Akrur Chandra,	অক্রূরচন্দ্র
Amarendra Náth,	অমরেন্দ্রনাথ
Amar Náth,	অমরনাথ
Ambiká Charan,	অম্বিকাচরণ
Amrita Kumár,	অমৃতকুমার
Amrita Lál,	অমৃতলাল
Amúlya Chandra,	অমূল্যচন্দ্র
Ánanda Chandra,	আনন্দচন্দ্র
Ánanda Kánta,	আনন্দকান্ত
Anádi Charan,	অনাদিচরণ
Ananga Mohan,	অনঙ্গমোহন
Ananta Kumár,	অনন্তকুমার
Anáth Bandhu,	অনাথবন্ধু
Annadá Prasád,	অন্নদাপ্রসাদ
Anukul Chandra,	অনুকূলচন্দ্র
Aparna Kánta,	অপর্ণাকান্ত
Ápína Chandra,	আপীনচন্দ্র
Aprakas Chandra,	অপ্রকাশচন্দ্র
Apúrva Krishna,	অপূর্ব্বকৃষ্ণ
Apárva Kumár,	অপূর্ব্বকুমার

Arjuna,	অর্জুন
Asidhárí,	অসিধারী
Asutosh,	আশুতোষ
Asoka Krishna,	অশোককৃষ্ণ
Atal Bihári,	অটলবিহারী
Atíndra Mohan,	অতীন্দ্রমোহন
Atul Chandra,	অতুলচন্দ্র
Atal Krishna,	অতুলকৃষ্ণ
Avatár Charan,	অবতারচরণ
Avinás Chandra,	অবিনাশচন্দ্র

B.

Badan Chandra,	বদনচন্দ্র
Baikuntha Chandra,	বৈকুণ্ঠচন্দ্র
Baikuntha Náth,	বৈকুণ্ঠনাথ
Báman Dás,	বামনদাস
Banamálí,	বনমালী
Banavári Lál	বনওয়ারিলাল
Bánesvar,	বাণেশ্বর
Bání Kantha,	বাণীকণ্ঠ
Banka Bihárí,	বঙ্কবিহারী
Bansídhar,	বংশীধর
Baradá Kánta,	বরদাকান্ত
Baradá Prasád,	বরদাপ্রসাদ
Barendra Kumár,	বরেন্দ্রকুমার
Basanta Lál,	বসন্তলাল
Bata Krishna,	বটকৃষ্ণ
Becharam,	বেচারাম
Benί Mádhav,	বেণীমাধব
Bhagaván Chandra,	ভগবান্‌চন্দ্র
Bhairavendra Mohan,	ভৈরবেন্দ্রমোহন
Bhairavi Mohan,	ভৈরবী মোহন
Bhárat Chandra,	ভারতচন্দ্র
Bhavajáni,	ভবজানি
Bhaváni Charan,	ভবানীচরণ
Bhaváni Prasád,	ভবানীপ্রসাদ

Bhímasen,	ভীমসেন
Bhavatáran,	ভবতারণ
Bholá Náth,	ভোলানাথ
Bhuban Mohan,	ভুবনমোহন
Bhúdev,	ভূদেব
Bhujanga Bhúshan,	ভুজঙ্গভূষণ
Bhúpendra Chandra,	ভূপেন্দ্রচন্দ্র
Bhúpendra Krishna,	ভূপেন্দ্রকৃষ্ণ
Bhúpendra Kumár,	ভূপেন্দ্রকুমার
Bhúpendra Lál,	ভূপেন্দ্রলাল
Bhúpendra Náráyan,	ভূপেন্দ্রনারায়ণ
Bidyádhar,	বিদ্যাধর
Bidyápati,	বিদ্যাপতি
Bihárí Lál,	বিহারীলাল
Bimola Charan,	বিমলাচরণ
Bimola Nanda,	বিমলানন্দ
Binoda Bihárí,	বিনোদবিহারী
Binodí Lál,	বিনোদীলাল
Bipin Bihárí,	বিপিনবিহারী
Bírbhadra,	বীরভদ্র
Bíresvar,	বীরেশ্বর
Bishnu Chandra,	বিষ্ণুচন্দ্র
Bisvambhar,	বিশ্বম্ভর
Bisva Ranjan,	বিশ্বরঞ্জন
Brahmánanda,	ব্রহ্মানন্দ
Bráhmana Dás,	ব্রাহ্মণদাস
Braja Bandhu,	ব্রজবন্ধু
Braja Bhúshan,	ব্রজভূষণ
Braja Chandra,	ব্রজচন্দ্র
Braja Dulál,	ব্রজদুলাল
Braja Gopal,	ব্রজগোপাল
Braja Kisor,	ব্রজকিশোর
Braja Lál,	ব্রজলাল
Braja Mádhav,	ব্রজমাধব
Braja Mohan,	ব্রজমোহন

Braja Náth,	ব্রজনাথ
Braja Pati,	ব্রজেন্দ্রপতি
Braja Ballabh,	ব্রজবল্লভ
Brajendra Chandra,	ব্রজেন্দ্রচন্দ্র
Brajendra Krishna,	ব্রজেন্দ্রকৃষ্ণ
Brajendra Kumár,	ব্রজেন্দ্রকুমার
Brajendra Lál,	ব্রজেন্দ্রলাল
Brajendra Náráyan,	ব্রজেন্দ্রনারায়ণ
Brajendra Ballabh,	ব্রজেন্দ্রবল্লভ
Brindávana Chandra,	বৃন্দাবনচন্দ্র

C.

Chandra Bhushan,	চন্দ্রভূষণ
Chandra Chúra,	চন্দ্রচূড়
Chandra Kumár,	চন্দ্রকুমার
Chandra Mádhav,	চন্দ্রমাধব
Chandra Mohan,	চন্দ্রমোহন
Chandra Náráyan,	চন্দ্রনারায়ণ
Chandra Náth,	চন্দ্রনাথ
Chandra Sekhar,	চন্দ্রশেখর
Cháru Chandra,	চারুচন্দ্র
Chha Karí,	ছকড়ী
Chakkan Lál,	ছক্কনলাল
Chhátradhárí,	ছত্রধারী
Chakuráni,	ছকুরাম
Chuni Lál,	চুনিলাল

D.

Dakhiná Ranjan,	দক্ষিণারঞ্জন
Dámodar,	দামোদর
Dasarath,	দশরথ
Dásarathi,	দাশরথি
Dayál Chand,	দয়ালচাঁদ
Deva Prasad,	দেবপ্রসাদ
Devendra Chandra,	দেবেন্দ্রচন্দ্র
Devendra Krishna,	দেবেন্দ্রকৃষ্ণ
Devendra Lál,	দেবেন্দ্রলাল

Devendra Náráyan,	দেবেন্দ্রনারায়ণ
Devendra Náth,	দেবেন্দ্রনাথ
Devendra Ballabh,	দেবেন্দ্রবল্লভ
Dhananjay,	ধনঞ্জয়
Dhanapati,	ধনপতি
Dhanes,	ধনেশ
Dharanídhar,	ধরণীধর
Dharma Dás,	ধর্ম্মদাস
Dhávak,	ধাবক
Dína Bandhu,	দীনবন্ধু
Dína Dayál,	দীনদয়াল
Dukarí,	দুকড়ী
Durgá Charan,	দুর্গাচরণ
Durgá Dás,	দুর্গাদাস
Durgá Gati,	দুর্গাগতি
Durgá Prasanna,	দুর্গাপ্রসন্ন
Dváraká Náth,	দ্বারকানাথ

G.

Gadádhar,	গদাধর
Gánánanda,	জ্ঞানানন্দ
Gánendra Mohan,	জ্ঞানেন্দ্রমোহন
Gánendra Náráyan,	জ্ঞানেন্দ্রনারায়ণ
Ganendra Náth,	গণেন্দ্রনাথ
Ganendra Lál,	গণেন্দ্রলাল
Gangá Náráyan,	গঙ্গানারায়ণ
Gangesa,	গঙ্গেশ
Gaur Dás,	গৌরদাস
Gaur Hari,	গৌরহরি
Gaur Lál,	গৌরলাল
Gaur Mohan,	গৌরমোহন
Gauri Kánta,	গৌরীকান্ত
Gauri Sankar,	গৌরীশঙ্কর
Gauri Náth,	গৌরীনাথ
Ghana Syám,	ঘনশ্যাম

Girijá Bhúshan,	গিরিজাভূষণ
Girijá Kánta,	গিরিজাকান্ত
Giríndra Krishna,	গিরীন্দ্রকৃষ্ণ
Giríndra Kumár,	গিরীন্দ্রকুমার
Giríndra Lál,	গিরীন্দ্রলাল
Giríndra Mohan,	গিরীন্দ্রমোহন
Giríndra Náráyan,	গিরীন্দ্রনারায়ণ
Giríndra Náth,	গিরীন্দ্রনাথ
Giris' Chandra,	গিরিশচন্দ্র
Gokul Bihárí,	গোকুলবিহারী
Golap Chandra,	গোলাপচন্দ্র
Golok Chandra,	গোলোকচন্দ্র
Golokendra,	গোলোকেন্দ্র
Gopál Chandra,	গোপালচন্দ্র
Gopál Krishna,	গোপালকৃষ্ণ
Gopál Lál,	গোপাললাল
Gopí Náth,	গোপীনাথ
Gostha Bihárí,	গোষ্ঠবিহারী
Govardhana,	গোবর্দ্ধন
Govinda Chandra,	গোবিন্দচন্দ্র
Govinda Charan,	গোবিন্দচরণ
Govinda Dás,	গোবিন্দদাস
Govinda Kisor	গোবিন্দকিশোর
Govinda Lál,	গোবিন্দলাল
Guru Dás,	গুরুদাস
Guru Saran,	গুরুশরণ

H.

Hara Dayál,	হরদয়াল
Hara Kánta,	হরকান্ত
Hárána Krishna,	হারাণকৃষ্ণ
Hara Náth,	হরনাথ
Harendra Krishna,	হরেন্দ্রকৃষ্ণ
Harendra Kumár,	হরেন্দ্রকুমার
Harendra Lal,	হরেন্দ্রলাল
Harendra Náráyan,	হরেন্দ্রনারায়ণ

Hari Charan,	হরিচরণ
Hari Dás,	হরিদাস
Harí Har,	হরিহর
Hari Mohan,	হরিমোহন
Hari Náth,	হরিনাথ
Hari Pada,	হরিপদ
Haris Chandra,	হরিশ্চন্দ্র
Hari Sakhá,	হরিসখা
Hem Chandra,	হেমচন্দ্র
Hem Náth,	হেমনাথ
Hemendra Chandra,	হেমেন্দ্রচন্দ্র
Hemendra Náth,	হেমেন্দ্রনাথ
Hemendra Krishna,	হেমেন্দ্রকৃষ্ণ
Hemendra Lál,	হেমেন্দ্রলাল
Hírá Lál,	হীরালাল

I.

Indra Bhúshan,	ইন্দ্রভূষণ
Indrajit,	ইন্দ্রজিৎ
Indra Kumár,	ইন্দ্রকুমার
Indra Náráyan,	ইন্দ্রনারায়ণ
Indu Bhúshan,	ইন্দুভূষণ
Indu Sekhar,	ইন্দুশেখর
Ísán Chandra,	ঈশানচন্দ্র
Ísvar Chandra,	ঈশ্বরচন্দ্র
Ísvara Krishna,	ঈশ্বরকৃষ্ণ
Ísvara Prasád,	ঈশ্বরপ্রসাদ
Ísvarí Prasád,	ঈশ্বরীপ্রসাদ

J.

Jádav Krishna,	যাদবকৃষ্ণ
Jadu Gopál,	যদুগোপাল
Jadu Náth,	যদুনাথ
Jagachchandra,	জগচ্চন্দ্র
Jagadánanda,	জগদানন্দ
Jagadbandhu,	জগদ্বন্ধু

Jagannmohan,	জগন্মোহন
Jagannath,	জগন্নাথ
Jahari Lál,	জহরিলাল
Jahar Lál,	জহরলাল
Jánakí Durlabh,	জানকীদুর্লভ
Jánakí Náth,	জানকীনাথ
Jánakí Ballabh,	জানকীবল্লভ
Janamejaya,	জনমেজয়
Janárdan,	জনার্দ্দন
Jaya Kálí,	জয়কালী
Janjit Lál,	জনজিতলাল
Jatíndra Lal,	যতীন্দ্রলাল
Jívánanda,	জীবানন্দ
Jívan Krishna,	জীবনকৃষ্ণ
Jívan Kumár,	জীবনকুমার
Joges Chandra,	যোগেশচন্দ্র
Jogesvara,	যোগেশ্বর
Jogendra Náth,	যোগেন্দ্রনাথ
Jogíndra Chandra,	যোগীন্দ্রচন্দ্র
Jogíndra Krishna,	যোগীন্দ্রকৃষ্ণ
Jogíndra Lál,	যোগীন্দ্রলাল
Jogíndra Náráyan,	যোগীন্দ্রনারায়ণ
Jogíndra Náth,	যোগীন্দ্রনাথ
Jyotih Prasád,	জ্যোতিঃপ্রসাদ

K.

Kailás Chandra,	কৈলাসচন্দ্র
Kailás Náth,	কৈলাসনাথ
Kailás Pati,	কৈলাসপতি
Kálá Cháńd,	কালাচাঁদ
Kálí Chandra,	কালীচন্দ্র
Kálí Charan,	কালীচরণ
Káli Dás,	কালিদাস
Kálikananda,	কালিকানন্দ

Káliká Dás,	কালিকাদাস
Kaliká Ranjan,	কালিকারঞ্জন
Káli Kinkar,	কালীকিঙ্কর
Káli Krishna,	কালীকৃষ্ণ
Káli Kumár,	কালীকুমার
Káli Mádhav,	কালীমাধব
Káli Mohan,	কালীমোহন
Káli Náráyan,	কালীনারায়ণ
Kali Náth,	কালীনাথ
Káli Pada,	কালীপদ
Káli Prasanna,	কালীপ্রসন্ন
Káli Tárá,	কালীতারা
Káli Ballabh,	কালীবল্লভ
Kámákhyá Náth,	কামাখ্যানাথ
Kamalá Kanta,	কমলাকান্ত
Kamal Krishna,	কমলকৃষ্ণ
Kánái Lál,	কানাইলাল
Kanak Chandra,	কনকচন্দ্র
Kártik Chandra,	কার্ত্তিচন্দ্র
Kartikeya,	কার্ত্তিকেয়
Karuná Chandra,	করুণাচন্দ্র
Krunamay,	করুণাময়
Kási Kánta,	কাশীকান্ত
Kedár Náth,	কেদারনাথ
Kedáresvar,	কেদারেশ্বর
Kesav Lál,	কেশবলাল
Khagendra,	খগেন্দ্র
Khelachchandra,	খেলচ্চন্দ্র
Khelaram,	খেলারাম
Khetra Mohan,	ক্ষেত্রমোহন
Khírod Chandra,	ক্ষীরোদচন্দ্র
Khírod Náth,	ক্ষীরোদনাথ
Khírod Sáyí,	ক্ষীরোদশায়ী
Kisorí Cháñd,	কিশোরীচাঁদ

Kisorí Lál,	কিশোরীলাল
Kisorí Mohan,	কিশোরীমোহন
Krishna Chandra,	কৃষ্ণচন্দ্র
Krishna Charan,	কৃষ্ণচরণ
Krishna Dás,	কৃষ্ণদাস
Krishna Dhan,	কৃষ্ণধন
Krishna Gopál,	কৃষ্ণগোপাল
Krishna Jívan,	কৃষ্ণজীবন
Krishna Kamal,	কৃষ্ণকমল
Krishna Kumár,	কৃষ্ণকুমার
Krishna Lál,	কৃষ্ণলাল
Krishna Mohan,	কৃষ্ণমোহন
Krishna Náráyan,	কৃষ্ণনারায়ণ
Krishna Pada,	কৃষ্ণপদ
Krishna Priya,	কৃষ্ণপ্রিয়
Krishna Sakhá,	কৃষ্ণসখা
Krishna Ballabh,	কৃষ্ণবল্লভ
Kunja Lál,	কুঞ্জলাল
Kunja Biháří,	কুঞ্জবিহারী

L.

Lakhmí Náráyan,	লক্ষ্মীনারায়ণ
Lál Gopál,	লালগোপাল
Lál Mohan,	লালমোহন
Lalita Krishna,	ললিতকৃষ্ণ
Lalit Kumár,	ললিতকুমার
Lalit Mohan,	ললিতমোহন
Láusen,	লাউসেন
Loharam,	লোহারাম
Lok Náth,	লোকনাথ

M.

Madan Gopál,	মদনগোপাল
Mádhav Chandra,	মাধবচন্দ্র
Madhu Súdan,	মধুসূদন
Mahendra Kumár,	মহেন্দ্রকুমার

Mahendra Lál,	মহেন্দ্রলাল
Mahendra Náráyan,	মহেন্দ্রনারায়ণ
Mahendra Nath,	মহেন্দ্রনাথ
Mahes Chandra,	মহেশচন্দ্র
Mahimá Chandra,	মহিমাচন্দ্র
Mahíndra Náth,	মহীন্দ্রনাথ
Mahtáb Chandra,	মহতাবচন্দ্র
Makaranda,	মকরন্দ
Mákham Lál,	মাখমলাল
Mathúra Náth,	মথুরানাথ
Mathurá Prasád,	মথুরাপ্রসাদ
Mati Lál,	মতিলাল
Meghanád,	মেঘনাদ
Megha Náth,	মেঘনাথ
Mukunda Chandra,	মুকুন্দচন্দ্র
Mukunda Mádhav,	মুকুন্দমাধব
Mukunda Rám,	মুকুন্দরাম
Munindra Náth,	মুনীন্দ্রনাথ

N.

Navín Krishna,	নবীনকৃষ্ণ
Nagendra Chandra,	নগেন্দ্রচন্দ্র
Nagendra Krishna,	নগেন্দ্রকৃষ্ণ
Nagendra Kumár,	নগেন্দ্রকুমার
Nagendra Lál,	নগেন্দ্রলাল
Nagendra Náráyan,	নগেন্দ্রনারায়ণ
Nagendra Náth,	নগেন্দ্রনাথ
Nakari,	নকড়ি
Nalini Kánta,	নলিনীকান্ত
Nanda Kisor,	নন্দকিশোর
Nanda Kumár,	নন্দকুমার
Nanda Lál,	নন্দলাল
Nara Náráyan,	নরনারায়ণ
Nara Sinha,	নরসিংহ
Náráyan Cháñd,	নারায়ণচাঁদ

Náráyan Charan,	নারায়ণচরণ
Náráyan Dás,	নারায়ণদাস
Narendra Krishna,	নরেন্দ্রকৃষ্ণ
Narendra Kumár,	নরেন্দ্রকুমার
Narendra Lál,	নরেন্দ্রলাল
Narendra Náráyan,	নরেন্দ্রনারায়ণ
Narendra Náth,	নরেন্দ্রনাথ
Narendra Ballabh,	নরেন্দ্রবল্লভ
Nayán Chand,	নয়ানচাঁদ
Nava Dulál,	নবদুলাল
Nava Gopál,	নবগোপাল
Nava Krishna,	নবকৃষ্ণ
Navín Chandra,	নবীনচন্দ্র
Navin Mádhav,	নবীনমাধব
Nikunja Ballabh,	নিকুঞ্জবল্লভ
Nikunja Bihárí,	নিকুঞ্জবিহারী
Níl Kánta,	নীলকান্ত
Níl Kantha,	নীলকণ্ঠ
Níl Mádhav,	নীলমাধব
Níl Mani,	নীলমণি
Nílámbar,	নীলাম্বর
Níl Ratna,	নীলরত্ন
Nimái Cháńd,	নিমাইচাঁদ
Nimái Chandra,	নিমাইচন্দ্র
Nimái Charan,	নিমাইচরণ
Niranjan,	নিরঞ্জন
Nitya Lál,	নিত্যলাল
Niváran Chandra,	নিবারণচন্দ্র
Nrisiñha,	নৃসিংহ
Nritya Gopál,	নৃত্যগোপাল
Nritya Lál,	নৃত্যলাল

P.

Pánchkarí,	পাঁচকড়ি
Pánná Lál,	পান্নালাল

Pares Náth,	পরেশনাথ
Párvatí Sankar,	পার্ব্বতীশঙ্কর
Phakir Chañd,	ফকিরচাঁদ
Phakir Dás,	ফকিরদাস
Pítámbar,	পীতাম্বর
Piyárí Lál,	পিয়ারীলাল
Piyárí Mohan,	পিয়ারীমোহন
Prabhát Chandra,	প্রভাতচন্দ্র
Prabodh Chandra,	প্রবোধচন্দ্র
Pravás Náth,	প্রবাসনাথ
Pramatha Náth,	প্রমথনাথ
Prán Dhan,	প্রাণধন
Prán Kumár,	প্রাণকুমার
Prán Náth,	প্রাণনাথ
Pranaves,	প্রণবেশ
Prán Ballabh,	প্রাণবল্লভ
Prán Priya,	প্রাণপ্রিয়
Prán Krishna,	প্রাণকৃষ্ণ
Prasád Dás,	প্রসাদদাস
Prasanna Chandra,	প্রসন্নচন্দ্র
Prasanna Kumár,	প্রসন্নকুমার
Pratáp Bhavan,	প্রতাপভবন
Pratáp Chandra,	প্রতাপচন্দ্র
Pratáp Rudra,	প্রতাপরুদ্র
Prithví Náth,	পৃথ্বীনাথ
Priya Lál,	প্রিয়লাল
Priya Náth,	প্রিয়নাথ
Priya Sakhá,	প্রিয়সখা
Priya Ballabh,	প্রিয়বল্লভ
Pyári Charan,	প্যারীচরণ
Pulin Biharí,	পুলিনবিহারী
Pundaríka,	পুণ্ডরীক
Púrna Chandra,	পূর্ণচন্দ্র
Púrnendu	পূর্ণেন্দু

R.

Rádhá Charan,	রাধাচরণ
Rádhá Krishna,	রাধাকৃষ্ণ
Rádhá Mádhav,	রাধামাধব
Rádhá Raman,	রাধারমণ
Rádhá Sundar,	রাধাসুন্দর
Rádhá Syám,	রাধাশ্যাম
Rádhá Ballabh,	রাধাবল্লভ
Rádhá Binod,	রাধাবিনোদ
Rádhika Charan,	রাধিকাচরণ
Rádhiká Lál,	রাধিকালাল
Rádhiká Mohan,	রাধিকামোহন
Rádhiká Náth,	রাধিকানাথ
Rádhiká Prasád,	রাধিকাপ্রসাদ
Rádhiká Ballabh,	রাধিকাবল্লভ
Rájí Charan,	রাজীচরণ
Rájí Krishna,	রাজকৃষ্ণ
Rájí Kumár,	রাজকুমার
Rájí Náráyan,	রাজনারায়ণ
Rajaní Kánta,	রজনীকান্ত
Rajaní Náth,	রজনীনাথ
Rájendra,	রাজেন্দ্র
Rájendra Krishna,	রাজেন্দ্রকৃষ্ণ
Rájendra Kumár,	রাজেন্দ্রকুমার
Rájendra Lál,	রাজেন্দ্রলাল
Rájendra Mohan,	রাজেন্দ্রমোহন
Rájendra Náráyan,	রাজেন্দ্রনারায়ণ
Rájendra Náth,	রাজেন্দ্রনাথ
Rákhál Chandra,	রাখালচন্দ্র
Rákhál Dás,	রাখালদাস
Rákhál Pati,	রাখালপতি
Rákhál Rájí,	রাখালরাজ
Rámá Prasád,	রমাপ্রসাদ
Rámá Prasanna,	রমাপ্রসন্ন

Rám Ballabh,	রামবল্লভ
Rám Chandra,	রামচন্দ্র
Rám Dás,	রামদাস
Rám Dulál,	রামদুলাল
Rám Durlabh,	রামদুর্ল্লভ
Rám Gopál,	রামগোপাল
Rám Hriday,	রামহৃদয়
Rám Jaya,	রামজয়
Rám Jívan,	রামজীবন
Rám Kánta,	রামকান্ত
Rám Krishna,	রামকৃষ্ণ
Rám Lál,	রামলাল
Rám Lochan,	রামলোচন
Rám Náráyan,	রামনারায়ণ
Rám Pada,	রামপদ
Rám Sakhá,	রামসখা
Rám Saran,	রামশরণ
Rám Sundar,	রামসুন্দর
Ramá Náth,	রমানাথ
Ramá Pati,	রমাপতি
Ramendra Krishna,	রমেন্দ্রকৃষ্ণ
Ramendra Lál,	রমেন্দ্রলাল
Ramendra Mádhav,	রমেন্দ্রমাধব
Ramendra Nárayan,	রমেন্দ্রনারায়ণ
Ramendra Náth,	রমেন্দ্রনাথ
Rames Chandra,	রমেশচন্দ্র
Rám Mohan,	রামমোহন
Rám Tatva,	রামতত্ত্ব
Ranchhor Lál,	রণছোড়লাল
Ranjit Lál,	রণজিতলাল
Rás Bihári,	রাসবিহারী
Ratnesvar,	রত্নেশ্বর
Rishivar,	ঋষিবর
Rukmini Kánta,	রুক্মিণীকান্ত

S.

Sadananda,	সদানন্দ
Sádhu Charan,	সাধুচরণ
Sádhu Ranjan,	সাধুরঞ্জন
Sambhu Chandra,	শম্ভুচন্দ্র
Sambhu Náth,	শম্ভুনাথ
Sankatábharan,	শঙ্কটাভরণ
Sankatácharan,	শঙ্কটাচরণ
Sankatádína,	শঙ্কটাদীন
Sarachchandra,	শরচ্চন্দ্র
Sáradá Prasád,	সারদাপ্রসাদ
Sarva Ranjan,	সর্ব্বরঞ্জন
Sarvesvar,	সর্ব্বেশ্বর
Sasadhar,	শশধর
Sasi Bhúshan,	শশিভূষণ
Sasi Kumár,	শশিকুমার
Sasi Náth,	শশিনাথ
Sasi Sekhar,	শশিশেখর
Sátkarí,	সাতকড়ী
Satyánanda,	সত্যানন্দ
Satya Charan,	সত্যচরণ
Satya Saran,	সত্যশরণ
Satya Prasád,	সত্যপ্রসাদ
Satyendra Mohan,	সত্যেন্দ্রমোহন
Satyendra Náráyan,	সত্যেন্দ্রনারায়ণ
Satyendra Náth,	সত্যেন্দ্রনাথ
Sítala Prasád,	শীতলাপ্রসাদ
Síta Náth,	সীতানাথ
Síta Rám,	সীতারাম
Siv Chandra,	শিবচন্দ্র
Siv Krishna,	শিবকৃষ্ণ
Siv Náth,	শিবনাথ
Srí Chandra,	শ্রীচন্দ্র
Srí Gopal,	শ্রীগোপাল

Srikrishna,	শ্রীকৃষ্ণ
Srímohan,	শ্রীমোহন
Srínáráyan,	শ্রীনারায়ণ
Srínáth,	শ্রীনাথ
Srípati,	শ্রীপতি
Sríram,	শ্রীরাম
Srírám Chandra,	শ্রীরামচন্দ্র
Sris' Chandra,	শ্রীশচন্দ্র
Sudarshan,	সুদর্শন
Súrendra Chandra,	শূরেন্দ্রচন্দ্র
Súrendra Lál,	শূরেন্দ্রলাল
Súrendra Mohan,	শূরেন্দ্রমোহন
Súrendra Nath,	শূরেন্দ্রনাথ
Súrendra Náráyan,	শূরেন্দ্রনারায়ণ
Súrya Kumár,	সূর্য্যকুমার
Súrya Náráyan,	সূর্য্যনারায়ণ
Suval Chandra,	সুবলচন্দ্র
Suval Krishna,	সুবলকৃষ্ণ
Syámá Bhúshan,	শ্যামাভূষণ
Syám Cháñd,	শ্যামচাঁদ
Syámá Charan,	শ্যামাচরণ
Syám Kánta,,	শ্যামকান্ত
Syámá Kumár,	শ্যামাকুমার
Syámá Pada,	শ্যামাপদ

T.

Tárá Ballabh,	তারাবল্লভ
Tárak Brahma,	তারকব্রহ্ম
Tárá Charan,	তারাচরণ
Tárá Krishna,	তারাকৃষ্ণ
Tárá Náth,	তারানাথ
Tárá Pada,	তারাপদ
Tárá Prasanna,	তারাপ্রসন্ন
Tárak Chandra,	তারকচন্দ্র
Tárak Náth,	তারকনাথ

Táriní Tanay,	তারিণীতনয়
Tariní Charan,	তারিণীচরণ
Táriní Prasád,	তারিণীপ্রসাদ
Tejaschandra,	তেজশ্চন্দ্র
Thákur Charan,	ঠাকুরচরণ
Thákur Dás,	ঠাকুরদাস
Thákur Lál,	ঠাকুরলাল
Tikam Lál,	টিকমলাল
Tilok Chandra,	তিলকচন্দ্র
Tin Kari,	তিনকড়ি
Trailokya Náth,	ত্রৈলোক্যনাথ
Trán Náth,	ত্রাণনাথ
Triguná Charan,	ত্রিগুণাচরণ
Trilochan,	ত্রিলোচন
Trilok Chandra,	ত্রিলোকচন্দ্র
Trilok Náth,	ত্রিলোকনাথ
Tripurá Chandra,	ত্রিপুরাচন্দ্র
Tripurá Charan,	ত্রিপুরাচরণ

U.

Uday Cháñd,	উদয়চাঁদ
Uday Chandra,	উদয়চন্দ্র
Umá Charan,	উমাচরণ
Umes Chandra,	উমেশচন্দ্র
Upendra Ballabh,	উপেন্দ্রবল্লভ
Upendra Krishna,	উপেন্দ্রকৃষ্ণ
Upendra Kumár,	উপেন্দ্রকুমার
Upendra Lál,	উপেন্দ্রলাল
Upendra Mohan,	উপেন্দ্রমোহন
Upendra Náth,	উপেন্দ্রনাথ
Upendra Náráyan,	উপেন্দ্রনারায়ণ

Hindu Personal Names.

অ

অক্রূরচন্দ্র	Akrúr Chandra.
অখিলচন্দ্র	Akhil Chandra.
অঘোরনাথ	Aghor Náth.
অর্জ্জুন	Arjun.
অটলবিহারী	Atal Bihárí.
অচ্যুতানন্দ	Achyutánanda.
অতীন্দ্রমোহন	Atíndra Mohan.
অতুলকৃষ্ণ	Atul Krishna.
অতুলচন্দ্র	Atul Chandra.
অদ্বৈতপ্রকাশ	Advaita Prakás.
অধরনাথ	Adhar Náth.
অনঙ্গমোহন	Ananga Mohan.
অনন্তকুমার	Ananta Kumár.
অনাথবন্ধু	Anáth Bandhu.
অনাদিচরণ	Anádi Charan.
অনুকূলচন্দ্র	Anukúl Chandra.
অন্নদাপ্রসাদ	Annadá Prasád.
অপর্ণাকান্ত	Aparná Kanta.
অপূর্ব্বকুমার	Apúrva Kumár.
অপূর্ব্বকৃষ্ণ	Apúrva Krishna.
অপ্রকাশচন্দ্র	Aprakás Chandra.
অভয়াচরণ	Abhayá Charan.
অমরনাথ	Amar Nath.
অমরেন্দ্রনাথ	Amarendra Náth.
অমূল্যচন্দ্র	Amulya Chandra.
অমৃতকুমার	Amrita Kumar.
অমৃতলাল	Amrita Lál.
অম্বিকাচরণ	Ambiká Charan.
অবতারচরণ	Avatár Charan.
অবিনাশচন্দ্র	Avinás Chandra.

অশোককৃষ্ণ	Asoka Krishna.
অসিধারী	Asidhárí.
অহীনচন্দ্র	Ahína Chandra.
অক্ষয়কুমার	Akhay Kumár.
অক্ষয়কৃষ্ণ	Akhay Krishna.
আ	
আদিত্যচরণ	Aditya Charan.
আনন্দকান্ত	Ánanda Kánta.
আনন্দচন্দ্র	Ánanda Chandra.
আপীনচন্দ্র	Ápína Chandra.
আফতাবচন্দ্র	Áftáb Chandra
আলোকনাথ	Alok Náth.
আশুতোষ	Ásutosh.
ই	
ইন্দুভূষণ	Indu Bhúshan.
ইন্দুশেখর	Indu Sekhar.
ইন্দ্রকুমার	Indra Kumár.
ইন্দ্রজিৎ	Indrajit.
ইন্দ্রনারায়ণ	Indra Naráyán.
ঈ	
ঈশানচন্দ্র	Ísán Chandra.
ঈশ্বরকৃষ্ণ	Ísvara Krishna.
ঈশ্বরচন্দ্র	Ísvar Chandra.
ঈশ্বরপ্রসাদ	Ísvara Prasád.
ঈশ্বরীপ্রসাদ	Ísvarí Prasád.
উ	
উদয়চন্দ্র	Uday Chandra.
উদয়চাঁদ	Uday Cháñd.
উপেন্দ্রকুমার	Upendra Kumár.
উপেন্দ্রকৃষ্ণ	Upendra Krishna.
উপেন্দ্রনাথ	Upendra Náth.
উপেন্দ্রনারায়ণ	Upendra Náráyan.
উপেন্দ্রমোহন	Upendra Mohan.

উপেন্দ্রবল্লভ	Upendra Ballabh.
উপেন্দ্রলাল	Upendra Lál.
উমেশচন্দ্র	Umes Chandra.
উমাচরণ	Umá Charan.

ঋ

ঋষিবর	Rishivar.

এ

এককড়ি	Ekkari.

ক

কনকচন্দ্র	Kanak Chandra.
কমলকৃষ্ণ	Kamal Krishna.
কমলাকান্ত	Kamala Kanta.
করুণাচন্দ্র	Karuná Chandrá.
করুণাময়	Karunámay.
কানাইলাল	Kánái Lál.
কামাখ্যানাথ	Kámákhyá Náth.
কার্ত্তিকচন্দ্র	Kártik Chandra.
কার্ত্তিকেয়	Kartikeya
কালাচাঁদ	Kálá Cháńd.
কালিকাদাস	Kaliká Dás.
কালিকানন্দ	Kálikánanda.
কালিকারঞ্জন	Káliká Ranjan.
কালিদাস	Kalí Dás.
কালীকিঙ্কর	Káli Kinkar.
কালীকুমার	Káli Kumár.
কালীকৃষ্ণ	Káli Krishna.
কালীচন্দ্র	Kali Chandra.
কালীচরণ	Káli Charan.
কালীতারা	Káli Tárá.
কালীনাথ	Káli Náth.
কালীনারায়ণ	Káli Náráyan.
কালীপদ	Káli Pada.
কালীপ্রসন্ন	Káli Prasanna.
কালীবল্লভ	Káli Ballabh.

কালীমাধব	Káli Mádhav.
কালীমোহন	Káli Mohan.
কাশীকান্ত	Kási Káuta.
কিশোরীচাঁদ	Kisori Cháñd.
কিশোরীমোহন	Kisorí Mohan.
কিশোরীলাল	Kisorí Lál.
কুঞ্জবিহারী	Kunja Bihárí
কুঞ্জলাল	Kunja Lál.
কৃষ্ণকমল	Krishna Kamal.
কৃষ্ণকুমার	Krishna Kumár.
কৃষ্ণগোপাল	Krishna Gopál.
কৃষ্ণচন্দ্র	Krishna Chandra.
কৃষ্ণচরণ	Krishna Charan.
কৃষ্ণজীবন	Krishna Jívan.
কৃষ্ণদাস	Krishna Dás.
কৃষ্ণধন	Krishna Dhan.
কৃষ্ণনারায়ণ	Krishna Náráyan
কৃষ্ণপদ	Krishna Pada.
কৃষ্ণপ্রিয়	Krishna Priya.
কৃষ্ণবল্লভ	Krishna Ballabh.
কৃষ্ণমোহন	Krishna Mohan.
কৃষ্ণলাল	Krishna Lál.
কৃষ্ণসখা	Krishna Sakhá.
কেদারনাথ	Kedár Náth.
কেদারেশ্বর	Kedáresvar.
কেশবলাল	Kesav Lál.
কৈলাসচন্দ্র	Kailás Chandra.
কৈলাসনাথ	Kailás Náth.
কৈলাসপতি	Kailása Pati.

খ

খগেন্দ্র	Khagendra.
খেলচন্দ্র	Khelachchandra.
খেলারাম	Khelá Ram.

গ

গঙ্গানারায়ণ	Gangá Naráyan.
গঙ্গেশ	Gangesa
গণেন্দ্রনাথ	Ganendra Náth.
গণেন্দ্রলাল	Ganendra Lál.
গদাধর	Gadádhar.
গিরিজাকান্ত	Girijá Kánta.
গিরিজাভূষণ	Girijá Bhúshan.
গিরিশচন্দ্র	Giris Chandra.
গিরীন্দ্রকুমার	Giríndra Kumár.
গিরীন্দ্রকৃষ্ণ	Giríndra Krishna.
গিরীন্দ্রনাথ	Giríndra Náth.
গিরীন্দ্রনারায়ণ	Giríndra Náráyan.
গিরীন্দ্রমোহন	Giríndra Mohan.
গিরীন্দ্রলাল	Giríndra Lál.
গুরুদাস	Guru Dás.
গুরুশরণ	Guru Saran.
গোকুলবিহারী	Gokul Bihárí.
গোপালকৃষ্ণ	Gopál Krishna.
গোপালচন্দ্র	Gopál Chandra.
গোপাললাল	Gopál Lal.
গোপীনাথ	Gopí Náth.
গোবর্দ্ধন	Gobardhan.
গৌরদাস	Gaur Dás.
গৌরমোহন	Gaur Mohan.
গৌরলাল	Gaur Lál.
গৌরহরি	Gaur Hari.
গৌরীকান্ত	Gauri Kánta.
গৌরীনাথ	Gauri Náth.
গৌরীশঙ্কর	Gauri Sankar.
গোবিন্দকিশোর	Govinda Kisor.
গোবিন্দচরণ	Govinda Charan.
গোবিন্দচন্দ্র	Govinda Chandra.
গোবিন্দদাস	Govinda Dás.

গোবিন্দলাল	Govinda Lál.
গোলাপচন্দ্র	Goláp Chandra.
গোলোকচন্দ্র	Golok Chandra.
গোলোকেন্দ্র	Golokendra.
গোসাঁইদাস	Gosañidas.
গোষ্ঠবিহারী	Gostha Bihárí.
ঘ।	
ঘনশ্যাম	Ghana Syam.
চ।	
চন্দ্রকুমার	Chandra Kumár.
চন্দ্রচূড়	Chandra Chúra.
চন্দ্রনাথ	Chandra Náth.
চন্দ্রনারায়ণ	Chandra Náráyan.
চন্দ্রভূষণ	Chandra Bhúshan.
চন্দ্রমাধব	Chandra Mádhav.
চন্দ্রমোহন	Chandra Mohan.
চন্দ্রশেখর	Chandra Sekhar.
চারুচন্দ্র	Cháru Chandra.
চুনিলাল	Chuni Lál.
ছ	
ছকড়ী	Chhakarí.
ছক্কন্‌লাল	Chhakkan Lál.
ছত্রধারী	Chhatradhárí.
ছকুরাম	Chhakurám.
জ	
জগচ্চন্দ্র	Jagachchandra.
জগদানন্দ	Jagadánanda.
জগদ্বন্ধু	Jagadbandhu.
জগন্মোহন	Jaganmohan.
জগন্নাথ	Jagannáth.
জনজিতলাল	Janjit Lál.
জনমেজয়	Janamejaya.
জনার্দ্দন	Janárdan.
জয়কালী	Jaya Kálí.

জহরলাল	Jahar Lál.
জহরিলাল	Jahari Lál.
জানকীদুর্লভ	Janaki Durlabh.
জানকীনাথ	Jánákí Náth.
জানকীবল্লভ	Jánakí Ballabh.
জীবনকুমার	Jívan Krishna.
জীবনকৃষ্ণ	Jívan Kumár.
জীবানন্দ	Jívananda.
জ্ঞানানন্দ	Gánánanda.
জ্ঞানেন্দ্রনারায়ণ	Gánendra Náráyan.
জ্ঞানেন্দ্রমোহন	Gánendra Mohan.
জ্যোতিঃপ্রসাদ	Jyotih Prasád.

ট

টিকমলাল	Tikam Lál.
ঠাকুরচরণ	Thakur Charan.
ঠাকুরদাস	Thakur Dás.
ঠাকুরলাল	Thakur Lál.

ত

তারকচন্দ্র	Tárák Chandra.
তারকনাথ	Tárák Náth.
তারকব্রহ্ম	Tárák Brahma.
তারাকৃষ্ণ	Tárá Krishna.
তারাচরণ	Tárá Charan.
তারানাথ	Tárá Náth.
তারাপদ	Tárá Pada.
তারাপ্রসন্ন	Tárá Prasanna.
তারাবল্লভ	Tárá Ballabh.
তারিণীচরণ	Táriní Charan.
তারিণীতনয়	Táriní Tavay.
তারিণীপ্রসাদ	Táriní Prasád.
তিনকড়ি	Tinkarí.
তিলকচন্দ্র	Tilak Chandra.
তেজশ্চন্দ্র	Tejaschandra.
ত্রাণনাথ	Trán Náth.

ত্রিগুণাচরণ	Triguná Charan.
ত্রিপুরাচন্দ্র	Tripurá Chandra.
ত্রিপুরাচরণ	Tripurá Charan.
ত্রিলোকচন্দ্র	Trilok Chandra.
ত্রিলোচন	Trilochan.
ত্রিলোকনাথ	Trilok Náth.
ত্রৈলোক্যনাথ	Trailokya Náth.

দ

দয়ালচাদ	Dayál Chánd.
দশরথ	Dasarath.
দক্ষিণারঞ্জন	Dakhiná Ranjan.
দামোদর	Dámodar.
দাশরথি	Dásarathi.
দিননাথ	Dina Náth.
দীনদয়াল	Dína Dayál.
দীননাথ	Dína Náth.
দীনবন্ধু	Dína Bandhu.
দুকড়ী	Dukarí.
দুর্গাগতি	Durgá Gati.
দুর্গাচরণ	Durgá Charan.
দুর্গাদাস	Durgá Dás.
দুর্গাপ্রসন্ন	Durgá Prasanna.
দ্বারকানাথ	Dváraká Náth.
দেবপ্রসাদ	Deva Prasád.
দেবেন্দ্রকৃষ্ণ	Devendra Krishna.
দেবেন্দ্রচন্দ্র	Devendra Chandra.
দেবেন্দ্রনাথ	Devendra Náth.
দেবেন্দ্রনারায়ণ	Devendra Náráyan.
দেবেন্দ্রবল্লভ	Devendra Ballabh.
দেবেন্দ্রলাল	Devendra Lál.

ধ

ধনঞ্জয়	Dhananjay.
ধনপতি	Dhanapati.
ধনেশ	Dhanesa.

ধরণীধর	Dharanídhar.
ধর্ম্মদাস	Dharma Dás.
ধাবক	Dhávak.

ন

নকড়ী	Nakarí.
নগেন্দ্রকুমার	Nagendra Kumár.
নগেন্দ্রকৃষ্ণ	Nagendra Krishna.
নগেন্দ্রচন্দ্র	Nagendra Chandra.
নগেন্দ্রনাথ	Nagendra Náth
নগেন্দ্রনারায়ণ	Nagendra Náráyan.
নগেন্দ্রলাল	Nagendra Lál.
নন্দকিশোর	Nanda Kisor.
নন্দকুমার	Nanda Kumár.
নন্দলাল	Nanda Lál.
নয়ানচাঁদ	Nayán Cháñd.
নরনারায়ণ	Nara Náráyan.
নরসিংহ	Nara Sinha.
নরেন্দ্রকুমার	Narendra Kumár.
নরেন্দ্রকৃষ্ণ	Narendra Krishna.
নরেন্দ্রনাথ	Narendra Náth.
নরেন্দ্রনারায়ণ	Narendra Náráyan.
নরেন্দ্রবল্লভ	Narendra Ballabh.
নরেন্দ্রলাল	Narendra Lál.
নলিনীকান্ত	Naliní Kánta.
নবকৃষ্ণ	Nava Krishna.
নবগোপাল	Nava Gopál.
নবদুলাল	Nava Dulál.
নবীনকৃষ্ণ	Navín Krishna.
নবীনচন্দ্র	Navín Chandra.
নবীনমাধব	Navín Mádhav.
নারায়ণচরণ	Náráyan Chandra.
নারায়ণচাঁদ	Náráyan Chánd.
নারায়ণদাস	Náráyan Dás.

নিকুঞ্জবল্লভ	Nikunja Ballabh.
নিকুঞ্জবিহারী	Nikunja Bihárí.
নিত্যলাল	Nitya Lál.
নিমাইচন্দ্র	Nimái Chandra.
নিমাইচরণ	Nimái Charan.
নিমাইচাঁদ	Nimái Cháñd.
নিরঞ্জন	Niranjan.
নিবারণচন্দ্র	Nivárań Chandra.
নীলকণ্ঠ	Níl Kantha.
নীলকান্ত	Níl Kánta.
নীলমণি	Níl Mani
নীলমাধব	Níl Mádhav.
নীলরত্ন	Níl Ratna.
নীলাম্বর	Nílámbar.
নৃত্যগোপাল	Nritya Gopál.
নৃত্যলাল	Nritya Lál.
নৃসিংহ	Nrisiñha.

প

পতিতপাবন	Patit Pávan.
পদ্মলোচন	Padma Lochan.
পরানন্দ	Paránanda.
পরিক্ষিত	Parikhit
পরেশনাথ	Pares Náth.
পান্নালাল	Panna Lál.
পার্ব্বতীশঙ্কর	Párvatí Sankar.
পাঁচকড়ি	Pánchkarí.
পিয়ারীমোহন	Piyárí Mohan.
পিয়ারীলাল	Piyárí Lál.
পীতাম্বর	Pitámbar.
পুণ্ডরীক	Pundaríka.
পুলিনবিহারী	Pulin Bihárí.
পূর্ণচন্দ্র	Púrna Chandra.
পৃথ্বীনাথ	Prithví Náth

প্যারীচরণ	Pyarí Charan.
প্রণবেশ	Pranaves.
প্রতাপচন্দ্র	Prataáp Chandra.
প্রতাপভবন	Prataáp Bhavan.
প্রতাপরুদ্র	Prataáp Rudra.
প্রভাতচন্দ্র	Prabhát Chandra.
প্রমথনাথ	Pramatha Náth.
প্রবাসনাথ	Pravás Náth.
প্রবোধচন্দ্র	Prabodh Chandra.
প্রসন্নকুমার	Prasanna Kumár.
প্রসন্নচন্দ্র	Prasanna Chandra.
প্রসাদদাস	Prasad Dás.
প্রাণকুমার	Prán Kumár.
প্রাণকৃষ্ণ	Prán Krishna.
প্রাণধন	Prán Dhan.
প্রাণনাথ	Prán Náth.
প্রাণপ্রিয়	Pránapriya.
প্রাণবল্লভ	Prán Ballabh.
প্রিয়নাথ	Priya Náth.
প্রিয়বল্লভ	Priya Ballabh.
প্রিয়লাল	Priya Lál.
প্রিয়সখা	Priya Sakhá.
ফ	
ফকিরচাঁদ	Phakir Chánd.
ফকিরদাস	Phakir Dás.
ব	
বঙ্কবিহারী	Banka Bihárí.
বটকৃষ্ণ	Bata Krishna.
বদনচন্দ্র	Badan Chandra.
বনওয়ারিলাল	Banavári Lál.
বনমালী	Bana Málí.
বরদাকান্ত	Baradá Kánta.
বরদাপ্রসাদ	Baradá Prasád.
বরেন্দ্রকুমার	Barendra Kumár.

বসন্তলাল	Basanta Lál.
বাণীকণ্ঠ	Baní Kantha.
বাণেশ্বর	Bánesvar.
বামনদাস	Báman Dás.
বিদ্যাধর	Bidyadhar.
বিদ্যাপতি	Bidyapati.
বিনোদবিহারী	Binod Bihárí.
বিনোদীলাল	Binodí Lál.
বিপিনবিহারী	Bipin Bihárí.
বিমলাচরণ	Bimalá Charan.
বিমলানন্দ	Bimalá Nanda.
বিশ্বম্ভর	Bisvambhar.
বিশ্বরঞ্জন	Bisva Ranjan.
বিষ্ণুচন্দ্র	Bishnu Chandra.
বিহারীলাল	Bihárí Lál.
বীরভদ্র	Bírbhadra.
বীরেশ্বর	Bíresvar.
বেচারাম	Becháram.
বেণীমাধব	Bení Mádhav.
বৈকুণ্ঠচন্দ্র	Baikuntha Chandra.
বৈকুণ্ঠনাথ	Baikuntha Náth.
বৃন্দাবনচন্দ্র	Brindávan Chandra.
বংশীধর	Bansídhar.
ব্রজকিশোর	Braja Kisor.
ব্রজগোপাল	Braja Gopal.
ব্রজচন্দ্র	Braja Chandra.
ব্রজদুলাল	Braja Dulál.
ব্রজনাথ	Braja Náth.
ব্রজপতি	Braja Pati.
ব্রজবন্ধু	Braja Bandhu.
ব্রজবল্লভ	Braja Ballabh.
ব্রজভূষণ	Braja Bhúshan.
ব্রজমাধব	Braja Mádhav.
ব্রজমোহন	Braja Mohan.

ব্রজলাল	Braja Lál.
ব্রজেন্দ্রকুমার	Brajendra Kumár.
ব্রজেন্দ্রকৃষ্ণ	Brajendra Krishna.
ব্রজেন্দ্র চন্দ্র	Brajendra Chandra.
ব্রজেন্দ্রনারায়ণ	Brajendra Náráyan.
ব্রজেন্দ্রবল্লভ	Brajendra Ballabh.
ব্রজেন্দ্রলাল	Brajendra Lál.
ব্রহ্মানন্দ	Brahmánanda.
ব্রাহ্মণদাস	Bráhmana Dás.

ভ

ভগবানচন্দ্র	Bhagaván Chandra.
ভবজানি	Bhava Jáni.
ভবতারণ	Bhava Táran.
ভবানীচরণ	Bhaváni Charan.
ভবানীপ্রসাদ	Bhaváni Prasád.
ভারতচন্দ্র	Bhárat Chandra.
ভীমসেন	Bhima Sen.
ভুজঙ্গভূষণ	Bhujanga Bhúshan.
ভুবনমোহন	Bhuban Mohan.
ভূদেব	Bhúdev.
ভূপেন্দ্রকুমার	Bhúpendra Kumár.
ভূপেন্দ্রকৃষ্ণ	Bhúpendra Krishna.
ভূপেন্দ্রচন্দ্র	Bhúpendra Chandra.
ভূপেন্দ্রনারায়ণ	Bhúpendra Náráyan.
ভূপেন্দ্রলাল	Bhúpendra Lál.
ভৈরবীমোহন	Bhariaví Mohan.
ভৈরবেন্দ্রমোহন	Bhairavendra Mohan.
ভোলানাথ	Bholá Náth.

ম

মকরন্দ	Makaranda.
মতিলাল	Mati Lál.
মথুরানাথ	Mathúra Náth.
মথুরাপ্রসাদ	Mathurá Prasád.
মদনগোপাল	Madan Gopal.

মধুসূদন	Madhu Súdan.
মহতাবচন্দ্র	Mahtáb Chandra.
মহিমচন্দ্র	Mahim Chandra.
মহীন্দ্রনাথ	Mahíndra Náth.
মহেন্দ্রকুমার	Mahendra Kumár.
মহেন্দ্রনাথ	Mahendra Náth.
মহেন্দ্রনারায়ণ	Mahendra Náráyan.
মহেন্দ্রলাল	Mahendra Lál.
মহেশচন্দ্র	Mahes Chandra.
মাখমলাল	Mákham Lál.
মাধবচন্দ্র	Mádhav Chandra.
মুকুন্দ চন্দ্র	Mukunda Chandra.
মুকুন্দমাধব	Mukunda Mádhav.
মুকুন্দরাম	Mukunda Rám.
মুনীন্দ্রনাথ	Munindra Náth.
মেঘনাথ	Megha Náth.
মেঘনাদ	Meghanád.

য

যতীন্দ্রমোহন	Jatíndra Mohan.
যতীন্দ্রলাল	Jatíndra Lál.
যদুগোপাল	Jadu Gopál.
যদুনাথ	Jadu Náth.
যাদবকৃষ্ণ	Jádav Krishna.
যোগীন্দ্রকৃষ্ণ	Jogíndra Krishna.
যোগীন্দ্রচন্দ্র	Jogíndra Chandra.
যোগীন্দ্রনাথ	Jogíndra Náth.
যোগীন্দ্রনারায়ণ	Jogíndra Náráyan.
যোগীন্দ্রলাল	Jogíndra Lál.
যোগেন্দ্রনাথ	Jogéndra Náth.
যোগেশচন্দ্র	Joges Chandra.
যোগেশ্বর	Jogesvara.

র

রজনীকান্ত	Rajaní Kánta.
রজনীনাথ	Rajaní Nath.

রত্নেশ্বর	Ratnesvar.
রমানাথ	Ramá Náth.
রমাপতি	Ramá Pati.
রমাপ্রসন্ন	Ramá Prasanna.
রমাপ্রসাদ	Ramá Prasád.
রমেন্দ্রকৃষ্ণ	Ramendra Krishna.
রমেন্দ্রনাথ	Ramendra Náth.
রমেন্দ্রনারায়ণ	Ramendra Náráyan.
রমেন্দ্রমাধব	Ramendra Mádhav.
রমেন্দ্রলাল	Ramendra Lál.
রমেশচন্দ্র	Rames Chandra.
রণজিতলাল	Ranjit Lál
রণছোড়লাল	Ranchhor Lál.
রাইচরণ	Rái Charan.
রাখালচন্দ্র	Rákhál Chandra.
রাখালদাস	Rákhál Dás.
রাখালপতি	Rákhál Pati.
রাখালরাজ	Rákhál Ráj.
রাজকুমার	Ráj Kumár.
রাজকৃষ্ণ	Ráj Krishna.
রাজনারায়ণ	Ráj Náráyan.
রাজেন্দ্র	Rájendra.
রাজেন্দ্রকুমার	Rájendra Kumár.
রাজেন্দ্রকৃষ্ণ	Rájendra Krishna.
রাজেন্দ্রনাথ	Rájendra Náth.
রাজেন্দ্রনারায়ণ	Rájendra Náráyan.
রাজেন্দ্রমোহন	Rájendra Mohan.
রাজেন্দ্রলাল	Rájendra Lál.
রাধাকৃষ্ণ	Rádhá Krishna.
রাধাচরণ	Rádhá Charan.
রাধাবল্লভ	Rádhá Ballabh.
রাধাবিনোদ	Rádhá Binod.
রাধামাধব	Rádhá Mádhav.
রাধারমণ	Rádhá Raman.

রাধাশ্যাম	Rádhá Syám.
রাধাসুন্দর	Rádhá Sundar.
রাধিকাচরণ	Rádhiká Charan.
রাধিকানাথ	Rádhiká Náth.
রাধিকাপ্রসাদ	Rádhiká Prasád.
রাধিকামোহন	Rádhiká Mohan.
রাধিকালাল	Rádhiká Lál.
রাধিকাবল্লভ	Rádhiká Ballabh.
রামকান্ত	Ram Kánta.
রামকৃষ্ণ	Rám Krishna.
রামগোপাল	Rám Gopál.
রামচন্দ্র	Rám Chandra.
রামজয়	Rámjaya.
রামজীবন	Rám Jívan.
রামতত্ত্ব	Rám Tattva.
রামদাস	Rám Dás.
রামদুর্লভ	Rám Durlabh.
রামদুলাল	Rám Dulál.
রামনারায়ণ	Rám Náráyan.
রামপদ	Rám Pada.
রামমোহন	Rám Mohan.
রামবল্লভ	Rám Ballabh.
রামলাল	Rám Lál.
রামলোচন	Rám Lochan.
রামশরণ	Rám S'aran.
রামসখা	Rám Sakhá.
রামসুন্দর	Rám Sundar.
রামহৃদয়	Rám Hriday.
রাসবিহারী	Rás Bihári.
রুক্মিণীকান্ত	Rukmini Kanta.

ল

ললিতকুমার	Lalit Kumár.
ললিতকৃষ্ণ	Lalita Krishna.
ললিতমোহন	Lalit Mohan.

লক্ষ্মীনারায়ণ	Lakhmí Náráyan.
লাউসেন	Láusen.
লালগোপাল	Lál Gopál.
লালমোহন	Lál Mohan.
লোকনাথ	Lok Náth.
লোহারাম	Loha Rám.

শ

শম্ভুচন্দ্র	Sambhu Chandra.
শম্ভুনাথ	Sambhu Náth.
শরচ্চন্দ্র	Sarachchandra.
শশধর	Sasadhar.
শশিকুমার	Sasi Kumár.
শশিনাথ	Sási Náth.
শশিভূষণ	Sasi Bhúshan.
শশিশেখর	Sási Sekhar.
শিবকৃষ্ণ	Siv Krishna.
শিবচন্দ্র	Siv Chandra.
শিবনাথ	Siv Náth.
শীতলাপ্রসাদ	Sítala Prasád.
শূরেন্দ্রচন্দ্র	Súrendra Chandra.
শূরেন্দ্রনারায়ণ	Súrendra Náráyan.
শূরেন্দ্রমোহন	Súrendra Mohan.
শূরেন্দ্রলাল	Súrendra Lál.
শ্যামকান্ত	Syáma Kánta.
শ্যামচাঁদ	Syáma Cháñd.
শ্যামকুমার	Syámá Kumár.
শ্যামাচরণ	Syámá Charan.
শ্যামানন্দ	Syámánanda.
শ্যামাপদ	Syámá Pada.
শ্যামাভূষণ	Syámá Bhúshan.
শ্রীকৃষ্ণ	Srikrishna.
শ্রীগোপাল	Srígopál.
শ্রীচন্দ্র	Srí Chandra.
শ্রীনাথ	Srináth.

শ্রীনারায়ণ	Srinaráyan.
শ্রীপতি	Srípati.
শ্রীমোহন	Srímohan.
শ্রীরাম	Srírám.
শ্রীরামচন্দ্র	Srírám Chandra.
শ্রীশচন্দ্র	Srís Chandra.
সঙ্কটাচরণ	Sankatá Charan.
সঙ্কটাদীন	Sankatádín.
সঙ্কটাভরণ	Sankatábharan.
সত্যানন্দ	Satyánanda.
সত্যচরণ	Satya Charan.
সত্যপ্রসাদ	Satya Prasád.
সত্যশরণ	Satya Saran.
সত্যেন্দ্রনাথ	Satyendra Náth.
সত্যেন্দ্রনারায়ণ	Satyendra Náráyan.
সত্যেন্দ্রমোহন	Satyendra Mohan.
সদানন্দ	Sadánanda.
সর্ব্বরঞ্জন	Sarva Ranjan.
সর্ব্বেশ্বর	Sarvesvar.
সাতকড়ি	Sátkari.
সাধুচরণ	Sadhu Charan.
সাধুরঞ্জন	Sádhu Ranjan.
সারদাপ্রসাদ	Sáradá Prasád.
সীতানাথ	Sítá Náth.
সীতারাম	Sítá Rám.
সুদর্শন	Sudarsan.
সুরেন্দ্রনাথ	Surendra Náth.
সুবলকৃষ্ণ	Suval Krishna.
সুবলচন্দ্র	Suval Chandra.
সূর্য্যকুমার	Súrya Kumár.
সূর্য্যনারায়ণ	Súrya Náráyan.

হ

হরকান্ত	Hara Kánta.
হরদয়াল	Hara Dayál.
হরনাথ.	Hara Náth.
হরিচরণ	Hari Charan.
হরিদাস	Hari Dás.
হরিনাথ	Hari Náth.
হরিপদ	Hari Pada.
হরিমোহন	Hari Mohan.
হরিশচন্দ্র	Haris Chandra.
হরিসখা	Hari Sakhá.
হরিহর	Hari Har.
হরেন্দ্রকুমার	Harendra Kumár.
হরেন্দ্রকৃষ্ণ	Harendra Krishna.
হরেন্দ্রনারায়ণ	Harendra Náráyan.
হরেন্দ্রলাল	Harendra Lál.
হারানকৃষ্ণ	Hárán Krishna.
হীরালাল	Hírá Lál.
হেমচন্দ্র	Hem Chandra.
হেমনাথ	Hem Náth.
হেমেন্দ্রকৃষ্ণ	Hemendra Krishna.
হেমেন্দ্রচন্দ্র	Hemendra Chandra.
হেমেন্দ্রনাথ	Hemendra Náth.
হেমেন্দ্রলাল	Hemendra Lál.

ক্ষ

ক্ষীরোদচন্দ্র	Khirod Chandra.
ক্ষীরোদনাথ	Khírod Náth.
ক্ষীরোদশায়ী	Khírod Sáyí.
ক্ষেত্রমোহন	Khetra Mohan.

Muhammadan Names.

A

'Abd-ul Awwal,	عبد الاول
'Abd-uç Çamad,	عبد الصمد
'Abd-ul Fattáh,	عبد الفتاح
'Abd-ul Ghafúr,	عبد الغفور
'Abd-ul Ghaní,	عبد الغني
'Abd-ul Ghaffár,	عبد الغفار
'Abd-ul Háfiz,	عبد الحافظ
'Abd-ul Hai,	عبد الحي
'Abd-ul Hakím,	عبد الحكيم
'Abd-ul Haq,	عبد الحق
'Abd-ul Husain Muhammad,	عبد الحسين محمد
'Abd-ul Jabbár,	عبد الجبار
'Abd-ul Karím,	عبد الكريم
'Abd-ul Kháliq,	عبد الخالق
'Abdullah,	عبد الله
'Abd-ul Latíf,	عبد اللطيف
'Abd-ul Majíd,	عبد المجيد
'Abd-ul Mançúr,	عبد المنصور
'Abd-ul Matlab,	عبد المطلب
'Abd-ul Mughní,	عبد المغني
'Abd-un Nabí,	عبد النبي
'Abd-ur Rab,	عبد الرب
'Abd-ur Rahmán,	عبد الرحمن
'Abd-ur Rahím,	عبد الرحيم
'Abd-ur Rashíd,	عبد الرشيد
'Abd-ur Raúf,	عبد الرؤف
'Abd-ur Razzáq,	عبد الرزاق
'Abd-us Subhán,	عبد السبحان
'Abd-ul Wadúd,	عبد الودود

Muhammadan Names.

'Abd-ul Wáhid,	عبد الواحد
'Abd-ul Wahíd,	عبد الوحيد
'Abd-ul Wájid,	عبد الواجد
Abul Khair,	ابو الخير
Abul Fazl,	ابو الفضل
Abú Muhammad,	ابو محمد
Açghar 'Alí Khán,	اصغر علي خان
Afzal-ud Dín,	افضل الدين
Afzal Husain,	افضل حسين
Ahmad,	احمد
Ahmad 'Alí,	احمد علي
Ahmad 'Alí Khán,	احمد علي خان
Ahmad Hasan,	احمد حسن
Ahmad Husain,	احمد حسين
Akbar Husain,	اكبر حسين
'Alá-ul Haq,	علاء الحق
'Alí Ahmad,	علي احمد
'Alí Amjad Husain,	علي امجد حسين
'Alí Husain,	علي حسين
'Alí Muhammad 'Abd-ul Qádir,	علي محمد عبد القادر
'Alí Nawáz,	علي نواز
Amír 'Alí,	امير علي
Amír Husain,	امير حسين
Amír-ud Dín Ahmad,	امير الدين احمد
Anwar 'Alí,	انور علي
Anwar-ud Dín Ahmad,	انور الدين احمد
Ashraf 'Alí,	اشرف علي
Ashraf Husain,	اشرف حسين
Ashraf-ud Dín,	اشرف الدين
'Atá-ur Rahmán,	عطاء الرحمن
Aulád Husain,	اولاد حسين
Azhar-ud Dín,	اظهر الدين
Azhar-ul Haq,	اظهر الحق
'Azím-ud Dín Husain,	عظيم الدين حسين

'Azíz-ur Rahmán,	عزيز الرحمن

B

Badr-ud Dín,	بدر الدين
Badr-ud Dujá,	بدر الدجى
Bashír-ud Dín,	بشير الدين
Bakhtáwar 'Alí,	بختاور علي
Bazl-ur Rahím,	بذل الرحيم
Báqí Billáh,	باقي بالله

Ç

Çabír-ur Rahmán,	صبير الرحمن
Çádiq Khán,	صادق خان
Çafdar Khán,	صفدر خان
Çiddiq Ahmad,	صديق احمد

D

Dabír-ud Dín Ahmad,	دبير الدين احمد
Dádár Bakhsh,	دادار بخش
Dalíl-ud Dín Ahmad,	دليل الدين احمد
Darásatulláh,	دراست الله
Dáúd Khán,	داؤد خان
Diláwar 'Alí,	دلاور علي
Diláwar Sultán,	دلاور سلطان
Dilír Khán,	دلير خان

F

Faizullah,	فيض الله
Faiz-ul Haq,	فيض الحق
Fakhr-ud Dín,	فخر الدين
Faqír Ahmad,	فقير احمد
Farid Bakhsh,	فريد بخش
Farid-ud Dín,	فريد الدين
Farzand 'Alí,	فرزند علي
Fathullah,	فتح الله
Fázil-ul Husain,	فاضل الحسين
Fazl i 'Alí,	فضل علي

Fazl-ul Haq,	فضل الحق
Fazl-ul Karím,	فضل الكريم
Fidá 'Alí,	فدا علي
Fidá Husaín,	فدا حسين

G

Gauhar 'Alí,	گوهر علي
Ghaffár 'Alí,	غفار علي
Gharíb Husain,	غريب حسين
Ghayás-ud Dín,	غياث الدين
Ghází-ud Dín,	غازى الدين
Ghulám Bait-ut Tamkín,	غلام بيت التمكين
Ghulám Husain,	غلام حسين
Ghulám Fáiq,	غلام فايق
Ghulám Jílání,	غلام جيلاني
Ghulám Mahdí,	غلام مهدي
Ghulám Makhdúm,	غلام مخدوم
Ghulám Maulá,	غلام مولى
Ghulám Nabí,	غلام نبى
Ghulám Qádir,	غلام قادر
Ghulám Rahmán,	غلام رحمن
Ghulám Rasúl,	غلام رسول
Ghulám Ya'qúb,	غلام يعقوب

H

Habíbullah,	حبيب الله
Habíb-ul Mughní,	حبيب المغني
Háfiz 'Alí,	حافظ على
Haidar 'Alí,	حيدر علي
Hamíd-ud Dín,	حميد الدين
Hamíd-ur Rahmán,	حميد الرحمن
Hashmatullah,	حشمت الله
Hasín-ud Dín,	حسين الدين
Hidáyat 'Alí,	هدايت علي
Husain 'Alí,	حسين علي

I

'Ibádullah,	عباد الله
Ibráhím 'Alí,	ابراهيم علي
Ihsán 'Alí,	احسان علي
Ikrám 'Alí,	اكرام علي
Ikrám Rasúl,	اكرام رسول
Imdád 'Alí,	امداد علي
'Ináyatullah,	عنايت الله
In'ám-ul Haq,	انعام الحق
Iqbál Husain,	اقبال حسين
Irshád 'Alí,	ارشاد علي
Irádat 'Alí,	ارادت علي
Is-háq,	اسحق
Isráíl,	اسرائيل
'Itrat Husain,	عترت حسين
'Izzat Husain,	عزت حسين

J

Ja'far 'Alí,	جعفر علي
Jahán Bakhsh,	جهان بخش
Jalál-ud Dín,	جلال الدين
Jamál-ud Dín,	جمال الدين
Jamshed 'Alí,	جمشيد علي
Jauhar 'Alí,	جوهر علي
Junaid Muhammad,	جنيد محمد

K

Kabír-ud Dín,	كبير الدين
Kalím-ud Dín,	كليم الدين
Kamál-ud Dín,	كمال الدين
Kámil,	كامل
Karámat Husain,	كرامت حسين
Kázim Husain,	كاظم حسين
Khabír-ud Dín,	خبير الدين
Khádim Husain,	خادم حسين
Khairát Husain,	خيرات حسين

Khájah 'Alí,	خواجه علي
Khalíl-uz Zamán,	خليل الزمان
Khúrshed 'Alí,	خورشيد علي
Khushnúd 'Alí,	خوشنود علي
Kifáyatullah,	كفايت الله

L

La'l Muhammad,	لعل محمد
Latíf-ur Rahmán,	لطيف الرحمن
Lutf-ur Rahmán,	لطف الرحمن

M

Ma'çúm 'Alí,	معصوم علي
Mahbúb Khán,	محبوب خان
Mahbúb-ur Rahmán,	محبوب الرحمن
Muhfúz-ul Haq,	محفوظ الحق
Mahmúd,	محمود
Máhtáb-ud Dín,	ماهتاب الدين
Mançúr 'Alí,	منصور علي
Maqçúd 'Alí,	مقصود علي
Mashiyatullah,	مشيت الله
Mazhar Beg,	مظهر بيگ
Mazhar Mu'íd,	مظهر معيد
Mazhar-ul Haq,	مظهر الحق
Mi'ráj-ud Dín,	معراج الدين
Mírzá Walí,	ميرزا ولي
Mu'azzim Husain,	معظم حسين
Mubárik 'Alí,	مبارك علي
Mufíz-ud Dín,	مفيض الدين
Mufíz-ul Husain,	مفيض الحسين
Muhammad,	محمد
Muhammad Abul Hasnát,	محمد ابو الحسنات
Muhammad Ahsan,	محمد احسن
Muhammad Akbar,	محمد اكبر
Muhammad Bakhsh,	محمد بخش
Muhammad Ibráhím,	محمد ابراهيم

Muhammadan Names.

Muhammad Khalíl,	محمد خليل
Muhammad Khán,	محمد خان
Muhammad Muhsin,	محمد محسن
Muhammad Sa'íd,	محمد سعيد
Muhammad Yúsuf,	محمد يوسف
Muhibb 'Alí,	محب علي
Muhí-ud Dín,	محي الدين
Mu'ín-ud Dín,	معين الدين
Mu'izz-ud Dín,	معز الدين
Mukhliç-ur Rahmán,	مخلص الرحمن
Mumtáz-ud Dín,	ممتاز الدين
Murtazá Khán,	مرتضى خان
Munír-ud Dín,	منير الدين
Muțí'-ur Rahmán,	مطيع الرحمان
Muzaffar Husain,	مظفرحسين

N

Naçír-ud Dín Ahmad,	نصير الدين احمد
Náçir-ud Dín Muhammad,	ناصر الدين محمد
Najíb-ur Rahmán,	نجيب الرحمن
Najm-ud Dín,	نجم الدين
Nihál-ud Dín,	نهال الدين
Nisár Ahmad,	نثار احمد
Nizám-ud Dín,	نظام الدين
Nizám-ud Daulah,	نظام الدولة
Núr Bakhsh,	نور بخش
Núr-ul Ghaní,	نور الغني
Núr-ul Husain,	نور الحسين

O

'Obaidullah,	عبيد الله
'Obaid-ul Akbar,	عبيد الاكبر
'Osmán Alí,	عثمان علي

P

Pír Bakhsh,	پير بخش

Q

Qamar 'Alí,	قمر علي
Qanbar 'Alí,	قنبر علي
Qásim 'Alí,	قاسم علي
Qasím-ud Dín,	قسيم الدين
Qawám-ud Dín,	قوام الدين
Qurbán Alí,	قربان علي
Qutb-ud Dín,	قطب الدين

R

Ráhatullah,	راحت الله
Rahím Bakhsh,	رحيم بخش
Rahmán Bakhsh,	رحمن بخش
Raihán-ud Dín,	ريحان الدين
Ramzán 'Alí,	رمضان علي
Rází-ud Dín Ahmad,	راضي الدين احمد
Riyásat-ud Dín,	رياست الدين

S

Sa'ádat Husain,	سعادت حسين
Sa'dullah,	سعدالله
Sakhá-ud Dín Muhammad,	سخا الدين محمد
Sarfaráz Husain,	سرفراز حسين
Sayyid 'Alí,	سيد علي
Shaikh Muhammad,	شيخ محمد
Shahámatullah,	شهامت الله
Shamsher 'Alí,	شمشير علي
Shams-ud Dín,	شمس الدين
Shujá'at Husain,	شجاعت حسين
Siráj-ud Dín,	سراج الدين

T

Táhir Razá,	طاهر رضا
Tafazzul 'Alí,	تفضل علي
Tahawur Husain,	تهور حسين
Táj-ud Dín,	تاج الدين

U

Ulfat Husain,	الفت حسين

W

Wáhid Bakhsh,	واحد بخش
Wájid 'Alí,	واجد علي
Wajíh Muhammad,	وجيه محمد
Wakíl-ud Dín,	وكيل الدين
Walí Muhammad,	ولي محمد
Wazír Khán,	وزير خان
Wiláyat Husain,	ولايت حسين

Y

Yahyá,	يحيى
Ya'qúb,	يعقوب
Yár 'Alí,	يار علي
Yúsuf,	يوسف

Z

Zafar 'Alí,	ظفر علي
Zamír-ud Dín,	ضمير الدين
Zain-ud Dín,	زين الدين
Zakariyá,	زكريا
Zínatullah,	زينت الله
Ziyá-ul 'Haq,	ضياء الحق
Zuhúr-ul Islam,	ظهور الاسلام
Zulfaqár 'Alí,	ذوالفقار علي

Muhammadan Names.

Abul Khair,	ابو الخير
Abul Fazl,	ابو الفضل
Abú Muhammad,	ابو محمد
Açghar 'Alí Khán,	اصغر علي خان
Afzal-ud Dín,	افضل الدين
Afzal Husain,	افضل حسين
Ahmad,	احمد
Ahmad 'Alí,	احمد علي
Ahmad 'Alí Khán,	احمد علي خان
Ahmad Hasan,	احمد حسن
Akbar Husain,	اكبر حسين
Amír 'Alí,	امير علي
Amír Husain,	امير حسين
Amír-ud Dín Ahmad,	امير الدين احمد
Anwar 'Alí,	انور علي
Anwar-ud Dín Ahmad,	انور الدين احمد
Ashraf 'Alí,	اشرف علي
Ashraf Husain,	اشرف حسين
Ashraf-ud Dín,	اشرف الدين
Azhar Husain,	اظهر حسين
Azhar-ud Dín,	اظهر الدين
Azhar-ud Dín Khán,	اظهر الدين خان
Azhar-ul Haq,	اظهر الحق
Ibráhím 'Alí,	ابراهيم علي
Ihsán Ahmad,	احسان احمد
Ihsán 'Alí,	احسان علي
Ihsán Husain,	احسان حسين
Ikrám 'Alí,	اكرام علي
Ikrám Rasúl,	اكرام رسول

Imdád 'Alí,	امداد علي
In'ám-ul Haḳ,	انعام الحق
Iqbál Husain,	اقبال حسين
Irshád 'Alí,	ارشاد علي
Irádat 'Alí,	ارادت علي
Is-háq,	اسحق
Isráíl,	اسرائيل
Ulfat Husain,	الفت حسين
ب	
Badr-ud Dín,	بدرالدين
Badr-ud Dujá,	بدر الدجيٰ
Bakhtáwar 'Alí,	بختاور علي
Báqí Billáh,	باقي بالله
Bashír-ud Dín,	بشير الدين
Bazl-ur Rahím,	بذل الرحيم
پ	
Pír Bakhsh,	پيربخش
ت	
Tafazzul 'Ali,	تفضل علي
Tahawwur Husain,	تهور حسين
Taj-ud Dín,	تاج الدين
ث	
Sanáullah,	ثناء الله
ج	
Ja'far 'Alí,	جعفر علي
Jahán Bakhsh,	جهان بخش
Jaláluddín,	جلال الدين
Jamál-ud Dín,	جمال الدين
Jamshed 'Alí,	جمشيد علي
Jauhar 'Alí,	جوهر علي
Junaid Muhammad,	جنيد محمد
ح	
Habíbullah,	حبيب الله
Habíb-ul Mughní,	حبيب المغني

Háfiz 'Alí,	حافظ علي
Haidar 'Alí,	حيدر علي
Hamíd-ud Dín,	حميدالدين
Hamíd-ur Rahmán,	حميد الرحمن
Hashmatullah,	حشمت الله
Hasín-ud Dín,	حسين الدين
Husain 'Alí,	حسين علي
	خ
Khabíruddín,	خبير الدين
Khádim Husain,	خادم حسين
Khairát Husain,	خيرات حسين
Khájah 'Alí,	خواجه علي
Khalíluz Zamán,	خليل الزمان
Khurshed 'Alí,	خورشيد علي
Khushnúd 'Alí,	خوشنود علي
Dabír-ud Dín Ahmad,	دبير الدين احمد
Dádár Bakhsh,	دادار بخش
Dalíl-ud Dín Ahmad,	دليل الدين احمد
Darásutullah,	دراست الله
Dáúd Khán,	داؤد خان
Diláwar 'Alí,	دلاور علي
Diláwar Sultán,	دلاور سلطان
Dilír Khán,	دليرخان
Zulfaqár 'Alí,	ذوالفقار علي
Ráhatullah,	راحت الله
Rahím Bakhsh,	رحيم بخش
Rahmán Bakhsh,	رحمن بخش
Raihán-ud Dín,	ريحان الدين
Ramzán 'Alí,	رمضان علي
Rází-ud Dín Ahmad,	راضي الدين احمد
Riyásatullah,	رياست الله

ز

Zainuddín,	زين الدين
Zínatullah,	زينت الله

س

Sa'ádat Husain,	سعادت حسين
Sa'dullah,	سعد الله
Sakhá-ud Dín Muhammad,	سخا الدين محمد
Sarfaráz Husain,	سرفراز حسين
Sayyid 'Alí,	سيد علي
Siráj-ud Dín,	سراج الدين

ش

Shahámatullah,	شهامت الله
Shaikh Muhammad,	شيخ محمد
Shamsher 'Alí,	شمشير علي
Shams-ud Dín,	شمس الدين
Sher 'Alí,	شير علي
Shujá'at Husain,	شجاعت حسين

ص

Çabír-ur Rahmán,	صبير الدين
Çádiq Khán,	صادق خان
Çafdar Khán,	صفدر خان
Çiddíq Ahmad,	صديق احمد

ض

Zamír-ud Din,	ضمير الدين
Ziyá-ul Haq,	ضياء الحق

ط

Táhir Razá,	طاهر رضا

ظ

Zafar 'Alí,	ظفر علي
Zuhúr-ul Islám,	ظهور الاسلام

ع

'Abd-ul Awwal,	عبد الاول
'Abd-uç Çamad,	عبد الصمد

'Abd-ul Fattáh,	عبد الفتاح
'Abd-ul Ghaffár,	عبد الغفار
'Abd-ul Ghafúr,	عبد الغفور
'Abd-ul Ghaní,	عبد الغني
'Abd-ul Háfiz,	عبد الحافظ
'Abd-ul Hai,	عبد الحي
'Abd-ul Hakím,	عبد الحكيم
'Abdul Haq,	عبدالحق
'Abd-ul Husain Muhammad,	عبد الحسين محمد
'Abd-ul Jabbár,	عبد الجبار
'Abdul Karím,	عبد الكريم
'Abd-ul Kháliq,	عبد الخالق
'Abdullah,	عبد الله
'Abd-ul Latíf,	عبد اللطيف
'Abd-ul Majíd,	عبد المجيد
'Abd-ul Mançúr,	عبد المنصور
'Abd-ul Matlab,	عبد المطلب
'Abd-ul Mughní,	عبد المغني
'Abd-un Nabi,	عبد النبي
'Abd-ur Rabb,	عبد الرب
'Abd-ur Rahím,	عبد الرحيم
'Abd-ur Rahmán,	عبد الرحمن
'Abd-ur Rashíd,	عبد الرشيد
'Abd-ur Raúf,	عبد الرؤف
'Abd-ur Razzáq,	عبد الرزاق
'Abd-us Subhán,	عبد السبحان
'Abd-ul Wadúd,	عبد الودود
'Abd-ul Wáhid,	عبد الواحد
'Alá-ul Haq,	علاء الحق
'Alí Ahmad,	علي احمد
'Alí Amjad Husain,	علي امجد حسين
'Alí Husain,	علي حسين
'Alí Muhammad,	علي محمد
'Alí Muhammad 'Abd-ul Qádir,	علي محمد عبد القادر

'Alí Nawáz,	علي نواز
'Atá-ur Rahmán,	عطا الرحمن
'Azím-ud Dín Husain,	عظيم الدين حسين
'Azíz-ur Rahmán,	عزيز الرحمن
'Ibádullah,	عباد الله
'Ináyutullah,	عنايت الله
'Itrat Husain,	عترت حسين
'Izzat Husain,	عزت حسين
'Obaidullah,	عبيد الله
'Obaid-ul Akbar,	عبيد الاكبر
'Osmán 'Alí,	عثمان علي

غ

Ghaffár 'Alí,	غفار علي
Gharíb Husain,	غريب حسين
Ghayás-ud Dín,	غياث الدين
Ghází-ud Dín,	غازي الدين
Ghulám Bait-ut Tamkín,	غلام بيت التمكين
Ghulám Fáiq,	غلام فائق
Ghulám Husain,	غلام حسين
Ghulám Jílání,	غلام جيلاني
Ghulám Mahdí,	غلام مهدي
Ghulám Makhdúm,	غلام مخدوم
Ghulám Maulá,	غلام مولى
Ghulám Nabí,	غلام نبي
Ghulám Qádir,	غلام قادر
Ghulám Rahmán,	غلام رحمن
Ghulám Rasúl,	غلام رسول
Ghulám Ya'qúb,	غلام يعقوب

Faiz-ul Haq,	فيض الحق
Faizullah,	فيض الله
Fakhr-ud Dín,	فخر الدين
Faqír Ahmad,	فقير احمد
Farid Bakhsh,	فريد بخش

Farid-ud Dín,	فريد الدين
Farzand 'Alí,	فرزند علي
Fathullah,	فتح الله
Fázil-ul Husain,	فاضل الحسين
Fazl i 'Alí,	فضل علي
Fazl-ul Haq,	فضل الحق
Fazl-ul Karím,	فضل الكريم
Fidá 'Alí,	فدا علي
Fidá Husain,	فدا حسين

ق

Qawám-ud Dín,	قوام الدين
Qambar Alí,	قمر علي
Qambar 'Alí,	قنبر علي
Qásim 'Alí,	قاسم علي
Qasím-ud Dín,	قسيم الدين
Qutb-ud Dín,	قطب الدين
Qurbán 'Alí,	قربان علي

ک

Kabír-ud Dín,	كبير الدين
Kalím-ud Dín,	كليم الدين
Kamál-ud Dín,	كمال الدين
Kámil,	كامل
Karámat Husain,	كرامت حسين
Kázim Husain,	كاظم حسين
Kifáyatullah,	كفايت الله

گ

Gauhar 'Alí,	گوهر علي

ل

La'l Muhammad,	لعل محمد
Latíf-ur Rahmán,	لطيف الرحمن
Lutf-ur Rahmán,	لطف الرحمن

م

Ma'çúm 'Alí,	معصوم علي
Mahbúb Khán,	محبوب خان

Muhammadan Names.

Mahbúb-ur Rahmán,	محبوب الرحمن
Mahfúz-úl Haq,	محفوظ الحق
Mahmúd,	محمود
Máhtáb-ud Dín,	ماهتاب الدين
Mançúr 'Alí,	منصور علي
Mashiyatu[l]lah,	مشيت الله
Mazhar Beg,	مظهر بيگ
Mazhar Mu'íd,	مظهر معيد
Mazhar-ul Haq,	مظهر الحق
Mi'ráju[d]dín,	معراج الدين
Mírzá Walí,	ميرزا ولي
Mubárik 'Alí,	مبارک علي
Mufíz-ud Dín,	مفيض الدين
Mufíz-ul Husain,	مفيض الحسين
Muhammad Ahsan,	محمد احسن
Muhammad Akbar,	محمد اكبر
Muhammad 'Alí,	محمد علي
Muhammad Bakhsh,	محمد بخش
Muhammad Ibráhím,	محمد ابراهيم
Muhammad Khán,	محمد خان
Muhammad Khalíl,	محمد خليل
Muhammad Muhsin,	محمد محسن
Muhammad Sa'íd,	محمد سعيد
Muhammad Yúsuf,	محمد يوسف
Muhibb 'Alí,	محب علي
Muhí-ud Dín,	محي الدين
Mu'ín-ud Dín,	معين الدين
Mu'azzim Husain,	معظم حسين
Mu'izz-ud Dín,	معز الدين
Mukhliç-ur Rahmán,	مخلص الرحمن
Mumtáz-ud Dín,	ممتاز الدين
Murtazá Khán,	مرتضى خان
Munír-ud Dín,	منير الدين
Muti'-ur Rahmán,	مطيع الرحمن

Muzaffar Husain,	مظفر حسين
ن	
Naçír-ud Dín Ahmad,	نصير الدين احمد
Náçir-ud Dín Muhammad,	ناصر الدين محمد
Najíb-ur Rahmán,	نجيب الرحمن
Najm-ud Dín,	نجم الدين
Nihál-ud Dín,	نهال الدين
Nisár Ahmad,	نثار احمد
Nizám-ud Dín,	نظام الدين
Nizám-ud Daulah,	نظام الدوله
Núr Bakhsh,	نور بخش
Núr-ul Ghaní,	نور الغني
Núr i Husain,	نور حسين
و	
Wakíl-ud Dín,	وكيل الدين
Wáhid Bakhsh,	واحد بخش
Wájid 'Alí,	واجد علي
Wajíh Muhammad,	وجيه محمد
Walí Muhammad,	ولي محمد
Wazír Khán,	وزير خان
Wiláyat Husain,	ولايت حسين
ه	
Hidáyat 'Alí,	هدايت علي
ي	
Ya'qúb,	يعقوب
Yahyá,	يحيى
Yár 'Alí,	يار علي
Yúsuf,	يوسف

JOHN INGLIS, Esq.,

COMMISSIONER OF ROHILCUND, BAREILLY.

SIR,

AT the instance of the Members of the Committee of Native gentlemen appointed at the late Rohilcund Exhibition, I have been induced to make a translation in English of the Vernacular Essay on Agriculture which I read on the occasion, and now beg to submit a few copies of the same for your perusal and for submission to Government, that the question of introducing the instruction of Agriculture into our Public Schools, and that such instruction may be permanently made a Branch of Public Education, may be fully considered and adopted; for the reason, that British India is chiefly an agricultural country, its chief source of public revenue is from the soil, and the wealth of its people is mainly derived from agricultural products.

2. The Committee are informed that a definite scheme for the establishment of an Agricultural College in the North-West Provinces was laid before the Government some time since, but it proved a failure, not from any want of support from the Government, but probably from the opinion that the public system of education already existing in our public schools did not possess the materials for this branch of instruction, but that a completely separate system would have to be inaugurated, which it was not considered convenient for the Government to decide upon for the present.

3. The Committee hope that any doubts the Government may then have had as to the propriety of the recommendation made by the Director of Public Instruction may

now be put aside, when it sees that the real wish of the people is expressed in the petition which they now present.

I have the honour to be,
Sir,
Your most obedient Servant,

LUCHMI NARAIN,
Banker and Municipal Commissioner of Bareilly,
and Hony. Secy. to the Native Committee of Rohilcund.

BAREILLY,
The 10th March 1867.

Ph.3

ESSAY.

THE SUBJECT which I have ventured to write upon is so varied and has so many ramifications that, to do it full justice, it cannot be compressed into the narrow limits of an Essay. To avoid being tedious to so mixed an audience as that now assembled, I shall treat the subject in a general manner, confining myself to an exposition of the principal points which present themselves to the view of even the most casual observer.

To all who have the slightest knowledge of Geography, it is well known that India is the richest and one of the most populous countries in the world. The soil is naturally so fertile, that even a small degree of cultivation is quite sufficient to produce a plentiful harvest.

The population is estimated at about twenty crores of souls, and the sum total of its area at 13,087,483 square miles. Russia has a larger area, but a smaller population; a large tract of her area is covered with jungle, or left uninhabited. Again, on the other hand, other countries, such as England, may have a larger population, but we exceed her in respect of area.

India is the epitome of all the world, we have certain portions as cold as England, and others again as warm as the tropical regions of Africa, scorched by a vertical sun.

The natural advantages of our country being so great, it can hardly be doubted that if the improved system of agriculture obtaining in England were to be introduced here, *mutatis mutandis*, so as to suit the requirements of our soil, India would in a very short time be one of the richest countries in the world.

State of agriculture in the old ages.

Even from very remote ages, we find the people of India pursuing agriculture as a profession, cultivating the sciences and arts ; in short, far ahead of other countries in the race of civilization.

The above is borne out by the old books and manuscripts extant. We find in the works of *Menu*, the Solon of India, rules for the division of lands, the way in which the revenue used to be realized, and the system of village accounts then followed. In his ninth chapter of the Dhurma Shastras, Sections 326 to 332, he says " that it is incumbent on the *Baish* (one of the castes of Hindoos, who, according to the division of labour then obtaining amongst us, were charged with the cultivation of land), not only to acquire sufficient knowledge of the science of agriculture, but also to know how the breed of cattle can be improved—how to tend the animals, and how to rear them up for purposes of agriculture and for the numerous other uses in which they are employed."

Subsequently, some of our patriarchs, seeing how closely improvement in agriculture depended on the breed of our cattle, appointed fairs at different dates, in different parts of the country, somewhat like our present Exhibitions, where the best bred animals were collected, with the view of giving an impetus to the improvement of the breed. Such fairs are still existing with us : witness those at Hurdwar and Butesur, &c., where hundreds of animals are collected annually, inviting purchasers from very remote parts of the country. To give an attraction to these fairs to ensure their success, they were, with that foresight which characterized almost all the acts of our patriarchs, established at places of holy resort, where thousands of individuals annually go to perform ablutions and other Hindoo rites. Had the fairs not been established where they were, they would, in the numerous changes of dynasty and civil dissensions and turmoil, to which our unfortunate country

was, previous to the accession of the British Government, exposed, have long ere this ceased to exist. As the people of India then used to live solely on agricultural pursuits and had much more simple tastes and wants than we have now, and as good and serviceable breed of cattle were then bred for the plough and for the purposes of irrigation, as are to be seen now, and as far as regards this country, the culture of cattle became indispensably necessary for all agricultural purposes, and with this object in view our old Hindoo rulers laid down stringent rules for the protection and good treatment of those animals.

The use of bullocks, except for the field and for conveyances, was strictly forbidden. These rules have by prescription acquired the force of religious injunction. Hence it is that this animal is held in such veneration amongst the Hindoos. Instances are very rare in which a Hindoo would wantonly ill-treat a bullock, and so far the laws framed by our forefathers for the protection of this animal have become completely successful. There are several rules on this subject tending to the same object, which also have in course of time acquired the force of religious precepts. It is enjoined that the calf shall be allowed to partake of all the nourishment that the parent cow can afford. The object of this rule is apparent, for when the young animal gets sufficient nutrition, he turns out a fine animal, well fitted for agricultural purposes.

There is another custom with us—namely, to set free on the occasion of a relative's death a number of good cows and one or more bulls, and set apart an adequate plot of grazing land for them to live upon. The animals are not subjected to any control. It is difficult to devise a better scheme for the improvement of the breed of these animals. The results of the operation of this rule were that our forefathers had always a fine stock of plough and draught cattle. Had not these safeguards been adopted by our far-

seeing and enlightened patriarchs, the stock of these animals would, on the decline of the Hindoo dynasties and the accession of the beef-eating Mahomedans, have become extinct from the face of India. The custom above adverted to still obtains; but, from a change in the government of the country, the best procurable cattle, as was the case in ancient times when Hindoos had the reins of government, and used their influence and power in the punctual observance of the rules of the Shastras, are not now set free, nor are any lands set apart for their support. The result is that the stock has much degenerated—a result which we cannot but deplore. The number is also decreasing every year, and, as a necessary consequence, bullocks are becoming dearer every day, and serious apprehensions are entertained that a time will come when the stock will not be able to bear the heavy drain upon it and may become extinct.

To prevent such a catastrophy, I would respectfully suggest that the breed of goats and sheep be improved, and that their flesh, which suits very well the climate of India, be used as food instead of beef, and bullocks be not employed except in the fields and for draught purposes.

Should the above suggestion be acted upon, the breed of cattle would be much improved, cultivation would prosper, and the price of the animals would be so lowered as to bring it within the reach of even the poorest peasant.

Perhaps some would turn round and say that, in making the above comments, I have been actuated by a sense of religious feeling. They would say that I, being a Hindoo, would, and do, naturally view with horror the slaughter of kine, and have availed myself of the present opportunity to press the point on your notice. But I solemnly assure you, and hope you will believe my assurance, that I am not actuated by any such feelings. No matter what my own view of the case is, looked from a religious point, this is not the proper place and time to enter into a disquisition

of the same. I am now merely handling the question as it affects our agriculture, and, as such, would press it upon your serious attention, when the prosperity and well-being of the people of our country mainly depended on our success in agricultural pursuits, and where improvement in the breed of our cattle is the main-spring of such success. A sense of our own pecuniary interests requires from us all, no matter whether Hindoo or Mahomedan, that we should see that our cattle are properly reared up and well-treated. We cannot but deplore and deprecate therefore the indiscriminate slaughter of kine going on around us. The Mahomedans themselves say, and it is written in their *Hudees* (traditions) that cow's milk is the elixir of life, whereas the use of beef has the very opposite qualities. The above is borne out also by the medical gentlemen of Europe, and by our famous Hukeems of old, who gravely stated that its use, especially in this tropical country of ours, tends to undermine the constitution, and bring on various diseases. As a practical illustration of the above, I would observe that if a census of the blind men in these Provinces be taken, the majority of them would be found to be Mahomedans.

It was on the score of health alone that the use of beef was interdicted by our sages, and which interdiction has by prescription come to be viewed in the light of a religious precept. Even the higher and well-to-do classes amongst the Mahomedans do not use it, and it is only the lower and poorer *strata* of the community, who cannot afford other kinds of flesh, take to it. We in this country can take only mutton with impunity. It is not so heating as beef, and its use is recommended by the Hukeems of all sects. We therefore look to our benevolent and benign British Government to initiate measures for the improvement in the breed of goats and sheep so as to bring them within the reach of all classes of its subjects.

Drawbacks to improvement in agriculture.

Our unfortunate country has all along, previous to the establishment of British rule, been subject to civil dissensions and turmoils, which solely engrossed the attention of its rulers, and they had no time to give their attention to the subject of agriculture ; nor, on the other hand, did the people trouble their heads about it, because then they had no security for their possessions. They were naturally averse to effecting any improvements in their estates when they could not reckon on its possession for any length of time. Moreover, the country being very warm, the people are not so hardy as those of England and other colder countries. But for this defect in our physical organization, nature has more than compensated us by giving us a rich soil, which does not require, like those in other countries, elaborate culture. Proper tillage and some little care are all that are necessary to yield an average crop, with which the people are quite contented. There was then no exportations of grain to other less favoured countries. What our forefathers produced was more than sufficient for their simple wants and ordinary population, and therefore that stimulus which alone leads to improvements was then wanting.

Under the beneficent rule we now enjoy, the above deterrent causes no longer exist. Our life and property are perfectly safe, but there is still one drawback to the full development of our country's resources. I allude to the holding back of the Permanent Settlement from these Provinces. Under the present system of Settlement, the zemindars are naturally slow in laying out large sums of money towards the improvement of their estates, with the dread of an enhancement of the Government revenue called the Jumma, after a short period, hanging *in terrorem* over them. However, as the Settlement now in progress is like-

ly to be declared permanent, I hope we will be able to present better results within a short time.

Necessity for improvement in the present system of agriculture

As under the British rule our country has been rapidly improving, and our exports in *rice, indigo, cotton, &c*, are increasing every year, thereby giving an impetus to cultivation previously unknown, it is incumbent on both the people and the Government (for both will be equally benefited by the measure) to try their best in effecting improvements in agriculture, so as to permanently secure those advantages which we have already got. Without such improvements we cannot be expected to hold our own and vie with other countries in the long run. As a practical illustration of this, I would allude to the exportation of cotton. When on the breaking out of the late American civil war the cotton trade of England went a-begging, we were fortunate enough to secure a portion. The result was that millions upon millions of rupees were poured into our lap; but, as soon as peace was declared in that country, the trade suddenly colapsed, prices ran down, and the cotton of our country could scarcely find a purchaser in the Liverpool and Manchester markets. Why this result? Simply because our product was of the commonest kind, and as soon as the prospect of obtaining an article of a superior quality was presented to the English manufacturers, they left off purchasing in the Indian market. Had we improved our opportunity, we should have probably been able to hold our ground against our Yankee competitors: so if we do not look sharp after our interests, a similar fate may overtake our other articles of export.

It is a general saying that he who comes to India carries back wealth to his own country. This is entirely correct, for history shows us that Mahomed Ghuzni, Nadir Shah, and other Mahomedan Emperors, carried immense wealth

to their countries. It is still said that wealth is being carried from India. The remark is so far correct that our imports far exceed our exports in value. Although they think wealth to be gold, silver, or hard cash coined, which no doubt is opposed to the principles of political economy, (for these are only the means of exchange and do not in themselves constitute wealth), yet the statement is perfectly true, though in quite a different sense. Not only those who have such views but all and every one of us should use our utmost endeavours to increase our exports, and as the land of India possesses great productive powers, and is naturally adapted for products of every season and climate, we must try to raise crops most in need abroad.

As an instance of the backward state of our cultivation, I would observe here, that in America, which was only discovered some four hundred years ago, the exports per head of the population were roughly calculated in 1839 at Rs. 8, whereas in this old country of ours we find them at 10 annas only, or at Rs. 2-10-0 gross, inclusive of the land-rent we have to pay.

Present state of our cultivators.

It is the rage with us now to cry down the profession of an agriculturist, but we should pause before giving into such senseless declamations, and recollect that it is from agriculture that we derive the wherewith to sustain life. This profession, especially in this country, bears, as our adage runs, the palm amongst the others, and trade ranks only second to it. It is to agriculture that we owe our prosperity—a prosperity which has ranked us in the van of the wealthiest nations in the world, a prosperity which has outlived the ravages of even Mahomedan conquerors!

We need not go far to trace the cause of the low estimation in which we hold this profession. It is attributable to the gross ignorance in which our cultivators are steeped.

Ignorance can never command respect. Now that the country has passed into the possession of the British, we have every hope that in course of time matters will mend, and our cultivators through education will be raised to that status in the social scale which they ought to hold. Cultivation will then, as a matter of course, much improve, and our cultivators will be able to vie with their fellow-labourers in other more civilized countries.

Now, with the rude implements and the slender stock of knowledge our cultivators possess, they cannot be blamed if they are only able to raise from cultivation just sufficient to keep the body and soul together after paying the necessary expenses of, and taxes on, their profession. The result is that in a season of drought they have nothing to fall back upon, and consequently starve by hundreds, or are made to suffer the greater ignominy of living upon cold charity.

The case would be far different when our cultivators are somewhat educated. Cultivation will then mostly improve, the yield of our harvests will be doubled or trebled, and when a season of drought comes, it will be shorn of all the horrors of a famine.

Defects in the present system of cultivation with hints for their removal.

The first thing which on entering into the question presents itself for our consideration, is the rude state of our implements of husbandry. They are very imperfect, and are susceptible of much improvement. Though the implements used in England would not suit our soil, that is no reason why ours cannot and should not be improved.

2*nd*.—Improvement in the breed of our cattle is the second thing necessary for ensuring improvement in cultivation. There are large Studs established at heavy outlay by Government in different parts of the country for

the breeding of horses. If similar arrangements were initiated as regards the breeding of bullocks, and stud-bred animals were to be imported and distributed amongst the zemindars, the desideratum might in course of time be supplied. We look up to Government in this, as well as indeed in all other matters, for we must confess that we are not as yet sufficiently enlightened to act independently of Government,—we have not yet acquired that degree of self-reliance which alone can do away with the assistance of the State and manage these things as they do in Europe and America.

3rd.—Some of our cultivators have not a sufficient number of cattle and ploughs to cultivate the lands in their possession. The generality of them have no less than 60 or 70, and in some cases even 100 kucha beegahs, and with only one plough at their disposal. The result is, that the lands are not properly turned up; one plough being only sufficient for 25 beegahs. In the present state of our rent-law the zemindars have no power to remedy the state of affairs, for the *assamees* (tenants), the majority of them having the rights of occupancy in the soil, cannot be disturbed in their possession. The result is loss to both the zemindars and assamees, which can be prevented only by an amendment of the existing law empowering the former in cases of recusancy or inability to reclaim a portion of such lands to give it away to some other party willing and able to look after them.

4th.—The seed used by the cultivators is not properly selected and well-dressed, otherwise there is no reason why the products should not be the best of their kind.

We would trace the cause of this unsatisfactory state of affairs to the extreme poverty of our tenants. They, in the generality of cases, live from hand-to-mouth. What they produce they consume in the course of the year, and when

the sowing season comes round, they have no alternative but to submit to the tender mercies of the usuerer for a supply of seed. These money-loving men, having an eye only to their own interests, give only the cheapest, and, therefore, not of the best procurable sorts. The assamee feeling himself bound hand-and-foot has no option in the matter. He must take what is offered, or go without the supply, which, in his case, is tantamount to utter ruin and destitution of himself and of all whom he holds dear.

This can be remedied if our gracious Government take upon itself to supply the seed for at least the next two or three years, and recover the cost afterwards. The arrangement would not only make the assamees independent of the greedy Bunneahs, but ensure a good supply. I would also respectfully suggest that a dressing and winnowing machine, like the one exhibited at the present Show, be sent to each Tehseelee, the cost thereof being paid out of the Municipal funds; and the zemindars be instructed to have the seed well cleaned and dressed by the machine before sowing.

The assamees might also be directed to set apart a small patch of land for the raising of seed alone, and to sow their lands less densely than they generally do, for the thinner and more distant the rows are the more vigorous will the plants be. Should the measures indicated above be initiated and systematically enforced, I doubt not that at the expiration of a couple of years we should be able to dispense with any further supply of seed from Government, and there would be a great improvement in the style of our cultivation.

5th.—The lethargy of our cultivators is a stumbling-block in the way of all improvement in agriculture. Though they have some knowledge of capabilities of the different kinds of soil still in practice, they completely ignore such

knowledge, and, walking in the footsteps of their forefathers, they are quite content to raise only those crops which they require for the daily necessaries of life, and cannot be made alive to the fact, that by raising better crops they might realize better profits, and from the proceeds purchase the means of improvement. In days gone by, when the present facilities for export were non-existent, the losses consequent on the adoption of such a blind policy were not felt. Had an adventurous *assamee* at the time I am speaking of taken into his head to raise a crop of indigo or other valuable crop, it would have been more than worthless to him, for there were then no markets to take such produce to, and what there were, were entirely cut off from all communication. The roads, moreover, were not safe.

But things are now very different in this go-a-head and practical nineteenth century. It is high time therefore that the *assamees* were made to see the advantages of leaving the worn-out policy of their forefathers. Previously, there being no great demand for agricultural products, as stated above, lands were not so extensively cultivated as now. In almost every village large plots were allowed to remain fallow for grazing purposes, and it was only after the lapse of two or three years, when they were well manured by the excrement of cattle, that the lands were broken up and brought under cultivation, their place being taken up by those previously under the plough. This plan was systematically followed. The result was, that not only was there always sufficient pasturage ground available for the cattle of the villagers, but the crops raised on the virgin soil were, as was to be expected, much better and heavier; now that the demand is greater, the ignorant cultivators, in their short-sightedness try to make the most of their lands, by bringing them under the plough every year and sometimes twice during that period. The lands cannot be expected

to bear such a heavy drain on their productive capabilities, and hence the complaint we now hear on all sides, that the harvests do not turn out so good as before, and the cattle are daily becoming degenerated, owing to want of sufficient pasturage.

6*th*.—To remedy this evil I would suggest that every assamee be instructed to cultivate alternately only half the quantity of land he has in his possession, setting apart the other moiety for the grazing of his cattle. I do not apprehend the cultivator will have in the long run any cause for complaint or regret in having acted on the above suggestions; for the yield for the one-half, if brought alternately under cultivation, will, I think, be more than that of the whole holding under the present system. Moreover, if it does after all fall a little short of the present yield, the loss will be more than compensated by the better provision we should have under the proposed plan for the support of our cattle.

7*th*.—It has been ascertained by experience that manure betters the produce. There is nothing so beneficial as manure to cultivation. But alas! artificial manure is not brought into use in this country. As regards natural manure, much of it is made useless and not looked after, and Gober (cowdung), which is the best of all manure, is used here as fuel. Were the zemindars to plant *Babool* and such other trees that grow quickly, in their waste lands, the dung would thus be spared for manure purposes Moreover, the planting of trees would otherwise be a source of benefit to the country. Leaves of trees would otherwise be a source of benefit to the country. Leaves of trees have an attractive power, *i*, *e*., they attract the electricity of the clouds called lightning, without which attraction no rain falls. It may be said, therefore, that the fall of rain is in proportion to the number of trees. Further, railways having lately

been introduced into this country, wood is required for working the engines and for other works connected with them. The planting of trees will thus be another source of income to the landholders. It is worthy of consideration that hundreds and thousands of trees have been planted by Government on the banks of the Ganges and Jumna Canals. Wood is daily cut and used, but there is no decrease in the number of trees thus standing. There will certainly at first be an outlay of money to the landholders under this proposal, yet they will shortly be more than compensated.

If this suggestion be accepted as advisable, I trust the Government will call on the landholders to act up to it. The authorities might personally inspect such plantations during their periodical visits to the interior of their respective districts, or let a statement be added in the ordinary *Huftgana* papers, showing the number of trees planted and cut annually. To facilitate the carrying out of this suggestion, it would, I think, be better if nurseries for such trees were kept and looked after in each Tehseelee, whence the zemindars might be permitted to take any number of young trees for their use.

The zemindars may have hitherto overlooked the plantation of trees, fearing lest the Government should charge such plots of land with rent, but the Settlement Officer of this district and the Commissioner have already submitted a report setting forth the reasons for exempting garden-lands from assessment, as they already have been exempted, and it is hoped that report will meet with the approval of Government, whose end and aim always ought to be to promote the interests of its subjects.

8*th*. Water may be said to be the life of everything. It is more especially required for cultivation, but in India the modes of irrigation are quite different in different parts.

In some parts irrigation is performed by means of large buckets drawn up by bullocks, in others by Persian wheels, in others by suspending two small iron or clay burnt vessels, worked by human labour, alternately rising up and going down the well, and in others by means of canals. It is almost impracticable to bring all the country under one system as regards irrigation.

But canals are certainly the most useful in their way, and the advantages that have resulted from them hardly need any remark from me, for it is well known that the ryots of those parts of the country where canals pass have become the richest. Six years ago there was a famine in the North-Western Provinces, and but for the canals its severities would have been more destructive. It is by these canals that hundreds and thousands of acres of land have been irrigated, and it is by means of these canals that thousands of human beings have escaped with their lives. Excepting the Ganges and the Jumna, from which canals have already been cut by Government, there are many rivers in this country, the waters of which may and can be used for irrigation purposes by cutting canals. It is true such works require great outlay of capital, but at last they will bring a good return. From what has been above set forth, it is clear that canals are of vital importance to the inhabitants of this country where rivers abound. Government should therefore first of all look to them. The Canal Department, it is generally complained, is not duly worked. The authorities should therefore look to it, and make the loosened screw tight: for the irrigation of those parts where canals cannot go it would be better to use machinery.

Yesterday, young gentlemen, you have yourselves seen that in so short a time as seven minutes a large well was quite emptied of its water by a pump worked by four bul-

locks, and that a column of water about one foot in diameter issued out of the pump worked by the steam engine.

9th.—Cutting the crop and taking the grain.

The manner of doing this is bad. In this country the crop is cut and stacked on a threshing-floor, and the grain is worked out of the husk by the treading of cattle.

This method is too dilatory. The grain lies for months in open fields, where it is often destroyed by a fall of rain, by fire, or some such accidents, which are not unfrequent. It is, moreover, stolen from the place, which, being an open field, is not well guarded. This method besides hurts the animals. If these operations are performed by cutting and winnowing machines, the working would be simple, and the useless hardship to which the bullocks are thus exposed would be avoided. Large landholders may send for such machinery for their own use, letting them on hire to smaller ones when not required by them. But this machinery cannot be brought in use without educating men in the art of agriculture.

Necessity of agricultural institutions.

Cotton was first sown in America in 1794. In that year 240 maunds only were exported. Fifty years after the exports touched some 73,504 lakhs of maunds. The Americans have similarly made improvements in growing other crops.

It is worthy of consideration that the productive power of land in India is in no way inferior to that of America, and India is governed for 100 years by the same race of men. Why should the cultivation in this country have been carried on according to the old methods, while America should have made such rapid advances in that way? The answer is simple. No endeavour has been made in this country towards instructing natives in this branch of knowledge, while in America agriculture is carried on according to scientific principles best adapted for that purpose.

The assertion, if made, that the people of India are not capable of receiving such instruction, cannot be supported, inasmuch as no trial has ever been made, nor can it fairly be made, by reason of the Government having taken no steps on this behalf. Experience shows that we have made, and are making, great improvements in other branches of knowledge which Government have been pleased to teach us. The science of mathematics is the most difficult and dry science, and if we have improved in it, why should we not be able to advance in agriculture, which is not so difficult? The development of the resources of the country depends on the instruction of the people in agriculture. It is essential that the Government should take the subject into favourable consideration.

A number of zemindars and cultivators should be selected for the purpose of acquiring such knowledge, and this can be done in no better way than by establishing agricultural schools, such as are established in France, England, and other countries of Europe.

Should the Government be pleased to make agriculture a branch of education in its public schools, for the maintenance of which it expends thousands of rupees, the measure will lead to manifold good results. Hundreds and thousands of beegahs of land covered with forest and lakes would be brought under the plough.

This system may be introduced experimentally as it was done in France in 1817, or as the village schools were first established by the late Mr. Thomason in eight districts of the North-West Provinces as a probationary measure. If the experiment realizes the expectations, *which it certainly must*, the system may then be extended to all zillahs.

Exhibitions have been set up by order of Government in the several districts with a view to the advancement of the agricultural products of the country and improvement of the breed of cattle, but I am of opinion that the subject in view

will not be gained unless agricultural instruction is first of all introduced in our schools, for until the people are trained in the principles of agriculture, both as an art and science, they cannot reasonably be expected to make any improvement in the quality of the produce which their lands yield. They can bring for show only such products as can be raised on the old principles.

Here is one thing more which requires notice. In the different prisons convicts are taught different professions with a view of turning them from the crooked paths of evil to place in their hands the means of honestly earning their livelihood. But the object is rarely gained in this country, because of the diversity of caste and professions allotted to each by prescriptive usages. For instance, a Brahmin convict, taught the profession of a shoe or carpet-maker, will no longer look to it for his support when set free. Agriculture, as a general profession, will engage people of every caste. Most of the convicts are peasants, therefore a farm and an agricultural school should be attached to every central prison, that the convicts may be trained in this profession, which will, besides gaining the above object, be the means of disseminating the knowledge of agriculture throughout the length and breadth of the country.

In conclusion, I beg to submit to the audience that, should you concur in the opinion expressed by me, a petition to the above effect may be drawn out and submitted to the Government through the Commissioner of Rohilcund.

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A REPORT

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ON THE

QUESTION OF

TEMPORARY AND PERMANENT SETTLEMENTS,

AS APPLIED TO THE

DISTRICT OF CAWNPORE.

BY

W. S. HALSEY,

HER MAJESTY'S BENGAL CIVIL SERVICE.

SECOND EDITION.

LONDON: PRINTED AT THE EXETER HALL PRINTING WORKS,
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PREFACE TO SECOND EDITION.

My Report on the question of a permanent settlement as regards the district of Cawnpore has met with much criticism. In some cases, my premisses have been entirely denied, my arguments disputed by misrepresentation of my words, and the whole Report condemned as unworthy of notice, being merely an endeavour to work out a wrong and foregone conclusion.

On the other hand, some have been good enough to admit there is a certain amount of truth in it, only that the facts have been overstated and exaggerated.

From these last I beg a further hearing. I have endeavoured during my leisure on furlough to support my assertions by independent testimony, and I anticipate, after the perusal of this edition, my friends will require something more than mere assertion to believe I am either wrong, or have in any way exaggerated the matter.

I have also added considerably to the subject of irrigation, and the method of giving permanency to settlements.

W. S. HALSEY.

A Report on the Question of Temporary and Permanent Settlements as applied to the District of Cawnpore, by W. S. HALSEY, *H.M.'s Bengal Civil Service.*

I HAVE been desired by the Board of Revenue to give my opinion on the general question of permanent and temporary settlements; to state whether it is or might be possible to lay down some standard of average rates, below which no settlement should be confirmed in perpetuity; whether rents have reached their full limits; whether, on a review of the prices of past years, it seems improbable to expect any further increase in prices; whether rents have so generally risen with prices as to render a further rise unlikely, in view of the probability of prices remaining stationary; whether the population is up to the ordinary standard; what is the margin of culturable land; what are the prospects of improved means of communication or irrigation; is the transition state of Bolundshur and other districts entered on, or nearly at an end, in this district; to furnish my opinion as to the staples by which the increase of prices should be tested; whether the share of rental assets at present left to the proprietors is excessive; whether I can assume any considerable prospective rise in rents; whether it is the case that the Courts refuse to raise the rents on right of occupancy-tenants to such a standard as would seem fair and equitable, having reference to rents paid by tenants-at-will; and finally, whether it would be expedient to leave the

assessments open to enhancement or readjustment during a term of temporary settlement, in consequence of the diminished value of metals, or the opening-up of roads, railways, and markets.

Before applying myself to any of the questions raised by the Board, it may be as well to give a short history of this district, for the benefit of those who have not access to Sir R. Montgomery's statistical report, published by Government in 1849.

The district of Cawnpore was ceded to the British Government in 1801, and at that time had a rent-roll of Rupees 2,256,156. The Government demand under the first assessment, which lasted for three years, was raised to Rupees 2,359,361. This was done by a Mr. Welland, who was the first Collector, and strange to say, after he had reported as follows on the state of the district:—

"The subjects in this part of the country are in the most abject poverty. Let the face of the country be examined, and there will hardly be a manufacture found, or an individual in such circumstances as to afford the payment of a tax; the whole is one desolate waste, in which tyranny and oppression have hitherto universally prevailed. . . . . But the people were full of confidence in the justice and integrity of the British Government, and looking forward to the blessings of a perpetual settlement, such as had been formed in Bengal, were ready to accede to any terms."

In the second year of this happy prospect famine fell on the land, and although the Government remitted Rupees 510,016 of the assessment of the district, the result was the sale in default of no less than 405 estates; and these sales would undoubtedly have been much more extensive, but that the Government could no longer find purchasers. The fact was, almost the only purchasers were the native officials. In proof of this, I proceed to quote from a letter of the Board of Commissioners, dated Furruckabad, September, 1810:—

"Considering, at the same time, the nature and extent of the hardships in which the excluded proprietors in the districts of Cawn-

pore, &c., are placed, and the very great number of estates which, in manifest violation of the laws, have been transferred; that the evil has been exclusively effected by the influence of the officers of Government, and under the abuse of its authority; that the suffering parties had recently become subjects of the British Empire, and were not only in general ignorant that their estates were liable to be transferred under a law totally foreign to their previous customs and rules of government, but in many cases uninformed of the actual or intended sale, and unconscious of the alleged arrears,"

the Commissioners proceeded to urge a special remedy, which eventually took the form of a Commission, under Regulation I., of 1821. Before proceeding to notice its action, I will quote from the first Report, dated April, 1822:—

"It fell to the lot of the Commission to disclose a system of complicated abuse which, under the supineness of the local authorities, enabled certain individuals possessed of official influence to pervert to their own benefit large remissions of public revenue granted by Government, in consequence of defalcations, occasioned principally by their own misconduct; to wrest from the rightful owners, by means of public sale and private transfer, a large proportion of the most valuable estates in the district; and to defraud the Government of the public resources, by procuring for themselves, in many instances, a deduction from the annual assessment at which these estates were severally assessed; by which Government, at the lowest estimate, has incurred ever since an annual loss of Rupees 50,000. . . . . Government, with a view to alleviate the distress occasioned by the drought, authorised remission and suspension of revenue to nearly one-sixth of the assessment of the whole district, but the distribution was left to the Tehseeldars (native sub-collectors), and they exercised their own discretion in varying it as suited their purposes, allowing to some estates a quarter in the rupee, in others only one-sixteenth, and in some cases one thirty-secondth. Moreover, in the year following, instead of making good to Government, as required by the Regulation, all balances accruing within their respective jurisdictions, they contrived to be exonerated from the payment of such arrears as were reported by them to be outstanding in all estates of which they themselves had assumed the management, and which arrears generally originated in their own oppressions and embezzlements. The estates were eventually brought to sale, and purchased by the Tehseeldars themselves, or their connections, at a very inadequate price."

To remedy the injustice caused by these sales, Regulation I., of 1821, was passed, and the special

Commission above referred to appointed, by whom the sales of 185 villages were reversed; but as this did not occur until long afterwards, it may be readily imagined that very few of the original owners were in a position to take much by appealing to the special Commission.

Moreover, the Commissioners soon found themselves involved in the question of subordinate titles. Immense confusion had been created in the first instance by an attempt to give an English title and its attributes to the different native words in use for defining the status of the heads of villages, and this confusion was intensified by the fraudulent statements of the native officers. The regulation intended to provide for the ascertainment of the tenures, rights, privileges, and interests of the agricultural community; but the Commission, even when they had ascertained these points, were not authorised to restore, or even to enter on the public records the name of any individual who was not found in *bonâ fide* possession of some part of the land in dispute. So that in 1826 we find them reporting to the Government:—

"From various causes it will be almost impracticable to define the nature and extent of private rights. . . . . The privileges of the managing landholders being at present but imperfectly understood, and those of the cultivators never having been directly recognised, it is impossible satisfactorily to pronounce upon them. . . . . It can scarcely be doubted that our public sales must, in most cases, have so broken asunder the whole constitution of the village communities within the estate sold, as that the mischief consequent upon them will be very imperfectly corrected by the mere restoration of the former Malgozars. If restored without any definition of their rights, those persons will probably seek to possess all the advantages of the auction purchasers, and to profit by their usurpations on the privileges of the non-recorded proprietors; and the restoration of the estate may not only fail to secure for the general body of the people the recovery of their legal rights, but prove the occasion of fresh evils in exciting disputes and litigation."

The upshot of all these doubts and difficulties was,

they lost sight of the original intent of the Regulation, they admitted and decided every sort of suit regarding land, and thus before its abolition, the Regulation, instead of being a means of restoring recently and fraudulently usurped rights, had, under the wide interpretation given by the Government to the Regulation, become an instrument of disturbance to tenures (which, however weak originally, ought, in respect to their antiquity, to have been considered sacred), and engendered a feeling of insecurity in all matters connected with the land.

In 1805 a fresh settlement, for a further period of three years, was made, which, though effected on the reduced assessment of Rupees 2,251,024, resulted in the further sale of 70 estates.

In 1807 special Commissioners were appointed to effect a new settlement, it being at that time the wish of the Government that, when fixed, it should be made perpetual.

This was the first general attempt that was made to form a Settlement by means of the Collectors in in person, on a knowledge of the actual assets. There was a difficulty, however, in obtaining materials to be trusted; and as these materials were supplied by the village accountants, the servants of the Zemindars, no confidence could be placed in their authenticity, and the Collector found himself reduced to framing an estimate founded on past assessments, and obtaining the consent of the proprietors, under a threat of measuring the village, or seeking another person to contract for its revenue.

The Collector, in his report on the question of a Permanent Settlement, wrote in favour of it, but recommended the new assessment should only be fixed on trial for fifteen years. He was of opinion that two-thirds of the arable and waste lands were under cultivation, and he furnished an estimate of the assets of each pergunnah, founded, as above pointed

out, on very unreliable information. The special Commissioners seem to have had no very great opinion of him, for they finally fixed the settlement for a period of three years only, at a reduced assessment of Rupees 2,169,340. Even this seems to have pressed very heavily on the people. Many landlords refused to engage, and villages paying revenue to the extent of Rupees 250,000 were let in farm, and during the currency of the settlement 49 more estates were sold.

In 1812 another settlement was made, by a Mr. Newnham, at a further reduction of Rupees 8,707, and this settlement, though originally only intended for four years, remained in force until 1840. It was at this period that the Board of Revenue were directed to ascertain what estates were in a state of cultivation to warrant the conclusion of a permanent settlement. The Board, in reply, applied for specific instructions in regard to the extent of waste which should operate to exclude estates from the benefit of a permanent settlement, and suggested that all estates of which two-thirds of the culturable land should be in actual cultivation might fairly be considered ripe for permanent assessment. The grounds on which this recommendation was founded were chiefly the following, and I quote them because most of them still exist:—

"That the soil of these provinces is in general much inferior to that of the Lower Provinces, that the seasons are more uncertain, and the crops liable to damage in a greater degree from drought and unseasonable rain, from frost, locusts, and frequent hail-storms; that an exuberant harvest is, in the existing stage of society here, almost as detrimental to the landholder as a scanty produce."

With reference to the Cawnpore district, the Board represented that the culturable area, not under tillage, was generally less than one-fifth, and in no cases exceeding one-fourth, but as they expressed considerable doubt as to the accuracy of the accounts on which the settlements had been formed, the pro-

ject of settlement in perpetuity was indefinitely postponed.

The period from 1812 to 1840 suffered, to a great extent, from rash speculations in Indigo and other country produce, and from the famous famine of 1837-38; this last alone brought about a remission of Government revenue, amounting to Rupees 1,710,971.

In 1840 began the settlement which, after lasting thirty years, has lately terminated. The financial result of this, at that time, was a further decrease of Rupees 108,392. This settlement was in a great measure effected by Mr. Rose, and was carried out on an entirely new plan; the whole country was surveyed, and maps prepared of every village, showing every field, and with them a detailed statement giving the names of every cultivator, his holding, rent, &c.

Mr. Rose commences his report on this settlement (dated 1842) by alleging that "no district has ever suffered so much from bad administration as Cawnpore;" but, notwithstanding this and superadding calamitous seasons, he records that "the flourishing appearance of the district must excite the wonder of all who had witnessed the utter state of ruin to which it was reduced by the famine." Further on he moderates this statement, and says, "there had been a general and extensive reduction of rent-rates, and that the cultivation was still much below the former standard." He goes on to say, "No district in the North-West Provinces can show an equal extent of country paying such high revenue rates as are prevalent in seven out of the nine sub-divisions of the district;" that "there are no local or permanent advantages on the part of Cawnpore sufficient to account for its very high revenue rates, as contrasted with those of similar districts;" that "an excessive revenue demand may be long exacted without any deficiency, so long as you have a set of

wealthy speculators at hand ready to put their money into land;" that "in no district has there been such a rapid and extensive change of landed property as in Cawnpore;" that "at least three-fourths of the landed property of the district had changed hands in the preceding thirty years."

He also makes the following observations, which I note, as they bear on subjects which I shall hereafter touch on:—"The demand for agricultural produce, caused by the large military cantonment at Cawnpore, might be adduced as a reason for the ready sale; but it would be a very unsafe one to take into account in fixing the assessment for a prolonged period; since various contingencies may at any time cause the transfer of troops to other parts of the country." Again, he says:—"The Kormee* villages were rated much above the standard of the district, and the estimates of pergunnah officers would, if adhered to, have added 30 per cent. to the former assessment."

Mr. Rose's anticipations of the recovery of the district from the effects of famine were, however, not realized. A revision of the settlement became necessary so early as 1845, which ended in a further reduction of Rupees 32,326. During the currency of the thirty years, the district has suffered from the Mutiny, and also from famine in 1861-62; and though no villages have been sold in default of revenue, no less than 1,598 villages, or portions of them, have changed hands within that period.

The following statement shows at a glance all the assessments of the district up to the present time:—

Settlements:—	1st.	2nd.	3rd.	4th.	5th.
Rupees	2,359,261 ...	2,251,024 ...	2,169,340 ...	2,189,656 ...	2,035,311

To sum up the proceedings of the past, we have five

* The Kormees are a caste of cultivators who may be said to understand what we call high farming, and are celebrated for their industry and agricultural skill.

times reassessed the district, and each time has been distinguished by a reduction of the Government demand and by large transfers of property. (Sir R. Montgomery furnished a statement showing that, from the cession up to 1846, 1,149 villages had been wholly transferred, and 301 in part, out of a total of 2,311. Appendix C shows transfers of 602 villages wholly and 996 villages in part.)

To get at the total transfers from the cession up to date, we must deduct from my tables 150 whole villages and 363 portions of villages transferred between 1840 and 1846; the balance, plus Sir R. Montgomery's figures, gives a grand total of 1,601 villages, or 69 per cent, wholly transferred, and 943 portion of villages, or 40 per cent., in part transferred. During the last two settlements we have twice suffered from famine and once from rebellion. We have not yet arrived at the long-expected permanent settlement, and with every desire to confer the blessings of justice, peace, and prosperity on the people, we can hardly claim to have been very successful.

A sixth settlement is now in progress, and it remains to be seen whether, profiting by the lessons of the past, anything can be done to better agricultural prospects, satisfied, as we must be, that we have gained nothing during seventy years by alterations of the assessment; that the cultivator, so far from thriving under our rule, is still in the same state of abject poverty he was described to be in 1801; and that the proprietor has been in a chronic state of transfer ever since the commencement of the century.

If we really wish to profit by the past, and look the whole subject fully in the face, we must at once admit that the only real standard which defines rates is the Government demand; that the rent-rates *per se* have no connection with, or bear any proportion to, the produce of the land; that they are the result of

the Government demand, which is light or heavy, in proportion to the statement of income received from the Government which preceded ours. To make my meaning clear, take, for instance, this district. The income received by our predecessors was stated to have been, in round numbers, twenty-two lacs. When we took over the district from the Newab, by some perfectly unintelligible process, the Collector for the time being arrived at a conclusion that the district could pay twenty-four lacs. One thing, however, is quite clear, he never made the slightest inquiry as to the productive resources of the country (we only find one mention of such inquiry during the first forty years of our rule, and the result of that even was said to have been a mass of errors, and utterly unreliable), so that in point of fact we accepted the Newab's rent-roll as it was called, which was simply a statement of the amount he and his subordinates were able to screw out of the people, and assuming the people could pay more under our beneficent rule, we added two lacs of rupees to the annual demand.

The proof of these assertions will be found in the following quotations:—

Note on the proceeding of the Government of Bengal appointing the Special Commission in 1821.

"The early settlements were made without any attempt to adjust the relative rights of the Suddur Malgozar and the under-tenants."

Resolution of the Government of India, August, 1822.

"Hitherto, generally speaking, the demand of Government seems to have been regulated by no clear and determinate rule."

Letter from the Governor-General, April, 1831.

"In some districts his Lordship understands it to have been the practice to assume, without reference either to the capabilities of the lands or their produce, or both, a rental to such amount as the assessing officer may think proper, and afterwards to distribute that amount over the villages."

Report by Mr. Tyler, Collector of Agra, August, 1831.

"In fact the plan generally pursued is the distribution on the

lands of the sum which the village is conjecturally supposed capable of paying, and so to assess them as aggregately to yield such an amount."

Report of the Collector of Etawah, 1807.

"The assessment of first triennial settlement was fixed at a considerable increase on the former assessment. In some cases higher offers were made, and in others the lands unengaged were advertised and the highest offers accepted."

Report of the Collector of Bareilly, 1807.

"The present resources of the district have not by any means been exactly ascertained."

Report of the Collector of Cawnpore, 1807.

"The Tehseeldars have been called upon to furnish a statement of the produce of each estate for the last three years, but have not yet sent it in."

As regards the question whether the Newab's rent-roll had any reasonable basis, we have the following authorities on the subject:—

Minute by the Governor-General, dated September, 1832.

"All that seems to have been ascertained is that our predecessors were guided by no fixed rules in their exaction of land revenue, and that their demands were proportioned to their exigencies."

Report of the Special Commission in 1825.

"The faithless character of the Amils, whose demands were usually such as left to the cultivator little beyond the means of a bare subsistence."

"The sole object of the native Government seems uniformly to have been to acquire as much revenue as possible, and no importance was attached to the title under which individuals contracted for the discharge of the public demand."

Report of Mr. Dumbleton, Collector of Cawnpore, dated April, 1800.

"The Board will be aware that for many years prior to the cession the rights of individuals were little attended to by the Amils, and whoever agreed to give the most was put in possession, and in general, the Chowdries, Canoongoes, and Mocuddums were the persons who were looked to for the revenue, and provided they got their revenue, it signified little how or from whom."

Minute by Mr. Bird, September, 1832.

"The Sovereign claimed a portion of the produce of every beegah.

What that portion of the produce should be was not fixed, it was perpetually changed at the will of the Sovereign. . . . . In my judgment, there is no known or fixed portion. . . . . After a most careful scrutiny in all the parts of the country where I have resided, I have never been able to discover any trace of such rule."

The rent-roll which we received from the Newab, plus the addition made by one Collector, was distributed over the pergunnahs, and again further subdivided over villages, or rather heads of villages, and they again subdivided it over the cultivators. In this way, it will be seen, the cultivator was made to contribute to meet the Government demand, and his contribution was dignified by the title of rent.

But if rent is what we generally understand it to be—viz., that portion of the value of the whole produce which remains to the owner of the land, after all the outgoings belonging to its cultivation, of whatever kind, have been paid, it is evident this contribution is not rent, for the produce of the land had never been ascertained, nor the cost of cultivation, nor the amount of profit, if any.

It is perfectly true the authors of Regulation VII., of 1822, contemplated a complete alteration in the method of assessment, and under it the settlement officers were directed to procure a most complete and comprehensive record of everything which could affect either rent or the parties who should pay it.

A record was to be formed of each field or parcel of land; beginning with the crop on the ground, the fruit on the trees, the produce of fisheries, pasturage, and forest, or the like, with the cesses levied from all residing in or frequenting the village, the settlement officer was to follow the disposal of them or the price thereof, until he traced them into the hands of persons possessing the unquestioned right of appropriating them as they please. His inquiries must, therefore, necessarily have been very full and detailed in regard to the extent of cultivation, the

kind of produce, the richness or poverty of the land, its capability of improvement, the rates of rent and modes of payment, the nature of tenures, the amount of actual collections; and his records ought to contain the name of every person having a permanent interest in the land or its produce, and the extent of interest possessed by each.

It is not to be wondered at that this attempt to grasp so much detail failed.

Sir R. Montgomery, in his evidence before the East India Finance Committee of the House of Commons, says:—

"This regulation ran into the opposite extreme of the former system. But the defect was, that it imposed on a limited agency unlimited duties."

Matters, however, went on for nearly forty years, with a very slight variation in the contribution paid by the cultivator, till in 1840 the Government officials, reversing the process by which the contribution had been fixed, evolved the Government demand out of the so-called rent.

In order to prove that this is what really occurred, it is necessary to have recourse to the records of those days.

In a Minute by the Governor-General, dated January, 1832, we find the following:—

"With regard to the practical effect of the minute investigation into produce, with a view to fix the public assessment, the sentiments of the revenue officers will be best shown by citing a portion of a letter from the Chief Commissioner of Delhi.

"It is remarkable that, notwithstanding the care with which Mr. Glyn has apparently laboured to apply to the regulation of the Government demand the several principles by which it should be theoretically guided, the result, so far from having led to the establishment of any practical rule of settlement founded on the application of those principles, seems only to have manifested the insufficiency of them all, and although the calculations of which they were the basis have served to check the conclusions drawn from a merely conjectural estimate of the resources which were the subject of com-

putation, yet, after all, the principal data of settlement appear to have been derived from a review of past payments compared with present circumstances, and from other obvious considerations of position and facility in realising the current revenue, aided by the reports of the tehseeldars concerning the character and condition of the proprietors."

Even the classification of soils, which appears, and very reasonably, to be the general criterion of assessment, is a fallacious guide in this country. On this subject Mr. E. Currie, employed on the settlement of the Raj Sattassee estate in Goruckpore, observes:—

"The rents actually paid by the cultivators for the different fields are what I have taken as the basis of the assessment, and it seems to me the only safe principle; for the ascertainment of the actual produce must be liable to very great uncertainties, and the productive powers of the different classifications of soil must vary much in the same class from contingencies of situation, facility of irrigation, &c.

On the general subject of settlements under Regulation VII., of 1822, Mr. Fraser says:—

"A thousand and twelve settlements under Regulation VII., 1822, are completed, or nearly so; 178 confirmed by Government.

"They seem to be made on different grounds, some by rates on produce, some on estimates of gross produce, taking a half or a third as the right of Government; others, on a classification of soils and rates applied, some on the year's produce, a great number on bargain, *i.e.*, how much the people will give and not go away; *not one that I have seen on a thorough based estimate of cost, produce, and profit, as the ground-work, and advertence to local free-will rent as the rule.*"

And accordingly we find in the Board's instructions, issued to settlement officers in 1832, the Khusreh is pointed out as the basis of settlement. This Khusreh was generally *to show*—1st, name or number of field; 2nd, classification; 3rd, size in pucka beegahs; 4th, by whom occupied; 5th, rent demanded. Nothing was said about produce or the cost of cultivation; and after the assessment was fixed, it was to be apportioned over the cultivators by the Mocuddum or the village Zemindar.

It is astonishing to find how, with all the trouble,

energy, and genius which were expended in carrying out the settlements from 1822 to 1840, no one was able to ascertain whether there were any profits in cultivation so as to make rent.

The whole ability of the staff was really engrossed in ascertaining what they called rent-rates, but what I call contribution-rates; and it is only now, when we find the whole district so rack-rented the people cannot be worse off, that we discover the land revenue, so far from being the rental of the Government property, is a forced contribution from the occupant thereof.

There is very little doubt, from the evidence above quoted, that this same process has been followed all through the North-West Provinces. Indeed, it would be otherwise impossible to account for the extraordinary variation in the so-called rent-rates in adjoining districts.

If, then, the Government are anxious to lay down some standard of average rent-rates for the whole North-West Provinces, it will be necessary first to discover whether there is any profit in cultivation —in fact, whether there is any basis for rent. Appendix A, which we shall presently discuss, throws great doubt on the question; and until those figures are shown to be materially wrong, it seems unnecessary to discuss it; one obstacle *primâ facie* appears, however, to be insurmountable—the distance of some portion of the provinces from the great centres of trade. The opening-up of new means of communication may reduce the difference considerably; but I cannot understand how anything we can do will ever put outlying districts on an equality with those in the immediate neighbourhoods of the great marts.

I will now proceed to discuss the questions raised by the Board, but in doing so I must be allowed to depart from the order in which they stand, for reasons

which will become obvious as we proceed; and premising that in all which follows I am referring only to the district of Cawnpore, I shall begin by giving my opinion as to the staples by which the increase of prices, if there be any, should be tested. These are gram, wheat, barley, joar, bajra, and sugar. The grounds on which my opinion is based will be found in the following statement:—

Total Produce of the District in 1848 *and in* 1871.

	1848*		1871
Gram	573,210	.....	600,000
Wheat	854,953	.....	2,723,433
Barley	1,334,336		
Joar	1,032,601	.....	531,261
Bajra	229,632		
Sugar	179,524	.....	200,000
TOTAL	4,204,256	.....	4,054,694
Cotton	144,915	.....	48,417
Miscellaneous	316,041	.....	1,375,117
GRAND TOTAL ...	4,665,212	.....	5,478,228

The six staples I have selected in 1848 formed 91 per cent. of the total produce of the district, and again in 1871 we find the same six staples forming 74 per cent. of the whole out-turn. This per-centage would, however, have been much larger had not the bajra and joar crop completely failed throughout the district.

The only other staple which might have been selected is cotton; I have rejected it because the cultivation is entirely regulated by speculation. If the price rules low during the months of April, May, and June—*i.e.*, just before the sowing season—the cultivation is sure to be curtailed. Moreover, I am firmly of opinion Bengal cotton will, before many years, almost disappear from the English price current. It is incapable of improvement at a profit, and can never compete with American cottons, which

* The figures of the year 1848 are taken from Sir R. Montgomery's work.

will ere long push it out of both European and China markets.

The staples I have selected show an increase in 1871 over 1848, whilst cotton shows a very considerable falling-off.

We will next take the question whether rents have reached their full limit. To test this I have prepared a statement, Appendix A. This contains a comparative and detailed account of the cost of cultivating the six principal staples of the district. Mr. Hume's figures are taken from a statement furnished by him in 1864 to the Board of Revenue; Sir R. Montgomery's are taken from his statistical report on the district of Cawnpore; my own are the result of inquiries extending over the past four years.

Mr. Hume's details are defective in many respects. Under the heading "seed," he has entirely omitted the large item of "sugar-cane slips;" on the other hand, he has accounted for a great deal too much seed for both bajra and joar; under the head "ploughing" and manure he has charged nothing for the hoeing and the hauling-out of the manure, nor has he allowed anything for weeding under sugar-cane and wheat; he has over-estimated the cost of irrigation, allowed nothing for thrashing and cleaning, and his rent-rate for sugar-cane is evidently only calculated on one year's occupation of the land. His total charges, however, very nearly tally with mine, and in produce we only differ considerably in the matter of bajra and sugar-cane. As regards sugar-cane, I have charged for the highest cultivation known in these parts, and consequently have credited my account with the highest known produce.

Sir R. Montgomery's details are still more defective; he allows nothing for manure, and nothing for weeding either barley or cotton. His well-irrigation is altogether under-estimated; his premisses are wrong. He asserts that one pair of bullocks can

water half an acre a day. This is quite out of the question: they might possibly, if hard pressed and worked for 14 hours, water half that area. As a fact, however, the average is nearer an eighth of an acre. Bird-scaring, reaping, and thrashing are all ignored, as is also the second year's rent for the sugar-cane field. The result is, that his charges fall far short of either Mr. Hume's or mine; and as his produce is the same, his statement shows a considerable profit to the cultivator. It is, however, but fair to add that he starts with the presumption that manure is rarely, if ever, used. I cannot say what was the case in his time, but I can bear testimony to the fact that now every village is emptied of everything in the shape of manure, just before the rainy season commences, and any one who is out in the district at that time will see every field anywhere near the village site dotted with manure-heaps.

The statement itself contains at foot the grounds on which my charges are based. I have endeavoured to keep them as low as possible, and have restricted my investigation to fields in which only one crop is cultivated; neither have I made any allowance for two crops in the season, because it is the exception, and not the rule, in this district. In a return lately made to Government, it was shown that out of a total cultivation of 853,820 acres, only 27,953, or little more than 3 per cent., bore two crops in the season.

As regards mixed crops, every one who knows anything of agriculture must know that the result will be diminished produce, whether it be wheat and rape, or barley and gram. It is only done in this country when the cultivator's area is small, and with the object of having a little of everything.

I have, however, given an out-turn considerably above the average, and, in the case of sugar-cane, a bumper crop. I have charged nothing for manure itself—only for the hauling-out; nor have I said

anything about the cost of getting the crop to market, as in this statement I have been discussing the cost and profit to the actual cultivator. A very small per-centage of these take their grain to market; it passes into the hands of the zemindar or money-lender on the threshing-floor. I have only made such charges as a cultivator may expect to have to pay when emigration sets in to other and less densely-populated provinces.

And here it may be as well to note the fact, that the wages of agricultural labour have hardly varied at all since the early part of the century.

I find Mr. Harding, Collector of Abygurh, reports in 1824:—

"Hired ploughman get Rupees 2 a month, and ¼ seer of grain; other labourers, ½ an anna a day, or 2½ seers of grain.

Mr. Carter, Collector of Goruckpore, 1824:—

"The wages of labour are moderate, being stated at one anna per diem."

Mr. Reade, Collector of Azimgurh, 1824:—

"The wages of labour are 2½ seers of grain daily."

The fact, however, that nearly all reaping, of whatever crop it may be, is paid for by shares, each crop having a different proportion; that the origin of these proportions is quite unknown; and that there is no ground for believing they have ever varied, more than anything goes to prove that wages have not risen. In the Appendix A, I have estimated the cost of reaping in money, but by far the largest proportion of the crops are reaped on the share principle.

Supposing this statement, then, stands the test of criticism, it will be manifest that, if the cultivator of this district had to pay for labour, he could not cultivate at a profit; that he can hardly be expected to be contented, and certainly cannot be considered a substantial peasant. And the fact remains that,

after payment of the rent, the margin left for the cultivator's subsistence is less than the value of the labour he has expended on his land.

This is, doubtless, a new view of the matter, but none the less, I assert, is it a true one? I do not mean to say that further inquiry may not alter the result I have brought out, but I am certain it will not do so materially. It will be observed that I speak of *the value* of the labour expended on the land, not as many of my critics have chosen to read it, *the cost*. In estimating this value, I have endeavoured to avoid using any such rates of labour as are affected by the neighbourhood of cities, charging only such rates as I believe the labouring population in the districts can command, if not in the shape of cash, in its value in grain.

It has been repeatedly alleged, from the earliest days down to the present time, that it is impossible to estimate the profit of agriculture. I maintain it is not; I maintain that careful inquiry must bring it out. In the simple form in which agriculture is carried on in India, only certain definite processes are gone through, from the moment the plough touches the land, until the crop is reaped and garnered. The produce of the land is easily ascertainable. For several years past, on the model farms, we have a record of what the land, under different circumstances of soil and cultivation, produced, and these experiments can be continued. And, even apart from this, no district officer can have any difficulty in obtaining an approximate estimate of the out-turn of any given field. Anyhow, I have ventured to estimate both the cost and out-turn, and it is for those who differ from me to show in what respect I have over or under-estimated.

I find Sir R. Montgomery, in his evidence before the East-India Finance Committee, says:—

"If a man were to attempt to cultivate the ground as an English farmer, his expenses would be so great, it would not pay him."

But I go further, and I challenge any district officer in the North-West Provinces to show that if a man were to lease land in the Cawnpore district, and cultivate it with *hired* labour, he could make a profit.

I assert that the abject poverty of the average cultivator of this district is beyond the belief of any one who has not seen it. He is simply a slave to the soil, to the zemindar, to the usurer, and to Government. Always living on a minimum of food, his physique suffers whenever there are high prices, either caused by famine on the spot or the depletion of the markets owing to famine elsewhere. It may be asked why, when things are so bad, he does not run away and try a new country. The answer to this is, there is no profession below agriculture; he believes, rightly or wrongly, his *status* would be no better in any other village, and with this drawback,—in times of bad seasons no one would help him. He knows by staying in his own village it will be to the interest of the zemindar and money-lender to leave him sufficient to keep himself and family alive (they all have families); when asked why he does not go, he helplessly ejaculates, "*Kahan jaega?*"—"Where shall I go?" and finally, there is that extraordinary love of home which, though prevalent in other nations, is a sort of mania in a Hindoo.* So he goes on from birth to death in the same hopeless, insolvent state, happy if he can only get a little tobacco for himself and a pewter bangle for his wife.

Can there be any greater proof of the small margin left for the existence of the cultivator, than the stereotyped, yet perfectly just, excuse in the Annual

* "Love Hara, O Worshipper! after the fashion of the peasant. The rent is heavy, the debts are many, still he loves his field," is the translation of an old Hindi couplet, given by Sir R. Elliott.

Police Reports for increase of crime, viz., increase of market prices?

I have said the cultivator finds men to lend him money, and for the true exposition of his existence, it will be as well to explain who these lenders of money to insolvents are, and how it is they are able to extract blood from a stone.

There are a class of usurers spread broadcast over the country, who lend money on a system called *ugai*, and make a very handsome profit out of it. It consists in advancing a man ten rupees on condition of his repaying the loan in twelve monthly instalments of one rupee each. When seven or eight months have elapsed, the unfortunate is encouraged to borrow another ten rupees on the same terms, but from this is deducted the balance of the first loan, and he finds himself involved for another twelve months with only the difference in cash, *i.e.*, seven or eight rupees. From this date he may be said to be hopelessly in the hands of the money-lender; before harvest-time a further loan, subject to the deductions as before, is taken, and the fruits of his labour go partly to meet his loan, partly to pay his rent, and partly to repay seed; the balance, if any, to keep body and soul together. I have inspected books belonging to these usurers, and have seen as many as six hundred separate accounts of this kind in one man's ledger.

In addition to this, and as I have referred to it above, I may as well mention the terms on which he gets seed. He obtains this generally from his zemindars, whose terms are not quite so usurious as those of the money-lender. The cultivator has to repay the original loan at harvest-time, with 25 per cent. more, and not unfrequently is bound to dispose of his whole crop to the zemindar, at rates favourable to the latter.

I may add, he lives entirely on the coarsest grains, one of which, *kesari*, is known to be actively dele-

terious, producing loin-palsy, cases of which are very prevalent in the southern pergunnahs of this district. He rarely, if ever, tastes wheat in any form.

There are of course agriculturists—take Koormees and Kachees, for instance—who, from generation to generation, have been accustomed to work harder and use more skill in their cultivation than the miserable creatures I have been speaking of; but even they can do no more than get their livelihood out of the land, perhaps put a little more clothing on their bodies, and eat wheaten flour instead of *bajra* or *kesari;* but then they are a class of cultivators from whom the zemindar exacts higher rents. So, also, does the British Government. On what principle the industrious, hard-working man is to pay a higher rent than his idle neighbour, I cannot understand, but it has always been an accepted principle that he should pay; and in proof of it, we find Mr. Caldecott, in 1832, when commenting on assessments fixed by classifications of soil, says:—

"It would be difficult to lay down any general principle, because every village will have some particulars which affect the profits, either favourably or unfavourably. Merely to give one example:—Two villages have the same kind of soil, but in one the cultivators are chiefly Koormees and Kachees, in the other mostly Brahmins and Rajpoots. In this case the produce of the first would exceed the produce of the latter by at least one-third; yet if the settlement was made on the classifications of soil, both must be assessed at the same rate."

That the villages to which these industrious classes chiefly belong are generally higher assessed than their neighbours, is to my mind but an instance of the rapacity of the Native Government, which has been perpetuated by the process I have previously described of converting forced contributions into rent. I have heard the principle defended on the ground that the land is the property of Government, and that Government is entitled to a share in whatever produce is got out of it. But what is to be

said, or rather in what way do those deserve to be treated, the inefficient and lazy cultivators who bury their talent? Their sins cannot be visited on them, and in consequence the glaring inequality of the assessment must remain, nor can you do away with the feeling of unfairness which such a system must generate.

I regret to say, that with few exceptions, the normal state of between three-fourths and four-fifths of the cultivators of this district is as I have above shown. It may appear to many to be exaggerated, and from the nature of the case it is of course impossible to produce figures in support of it, nevertheless it is the result of my personal observations. The more I think over the condition of the peasantry of this district, the more I feel the impossibility of showing how, in any one way, they have benefited, socially, morally, or materially, by our rule, and I feel confident the result of the whole discussion will be to prove I have not overstated the truth.

Such being the position of the peasantry of this district, I need only add that the so-called revenue-rates of the district have been, during the past thirty years, higher than the rates of any other district in the North-West Provinces; and asserting that the transition state of Bolundshur and other districts neither has been, nor is ever likely to be, entered on in this district, leave the Board of Revenue to decide whether rents have not more than reached their full limit, and whether the Government is still, or ever will be, entitled to a further share in the labour of these slaves of the soil.

I will now proceed to review the prices of the past years.

Appendix B contains the prices of the five principal staples of the district. The rates quoted in the table from 1823 to 1837 are abstracted from Sir R. Montgomery's statistical work; from 1838 up to the

present time, they represent actual prices paid by merchants of this city at harvest-time in each year. The books of two of the oldest and largest *firms* of this city were kindly placed at my disposal, and I caused the actual rate paid for a specific transaction during the month of Bysakh, equal to our month of May, in each year to be abstracted.

This list of prices shows a result very different from the generally received opinion as to a rise in prices.

I regret that I have not been able to obtain access to any old reports on prices with reference to this district, but I have seen one, dated 1822, by Mr. Harding, Collector of Allyhgurh, a district almost adjoining Cawnpore to the north, in which the average price of wheat is given for the preceding ten years at 24 seers, and barley $35\frac{2}{3}$ per rupee. This is, in a great measure, confirmatory of the truth of my statement.

I regret I cannot quote from any authority as to the sort of harvest there was from year to year, but from all I can ascertain and all I can myself recollect of the periods from 1840 to 1850 and 1850 to 1860, to the latter of which my experience is alone confined, the harvests during these decades were above, rather than below, the average, and considerably in excess of the two previous decades. The low prices and fine harvest of 1871 go very far to establish this, the prices of this year being on a par with those two decades.

If this is the case—and general report bears my assumption out—the cheapness of grain during those two decades is at once accounted for, and the fact established—*there has been no rise in prices quoad the principal staples of the district during the past fifty years.*

I have not thought it necessary to include cotton in this table, as it is now well known the rise in price of that article was quite ephemeral and

solely due to the American war. We have, since 1871, again reached the level of the ante-American war period, viz., Rupees 13 per maund. I have omitted also sugar, and other products of a like nature, the cultivation of which may be fairly called market-gardening; because this high farming is carried on by an infinitely small per-centage of the population, and because, were it increased to any extent, the profits would immediately decrease, and further, because rents derived from that class of cultivation could never be used as a general standard for the district, one whit more than the ordinary cultivator, taken as he is, could be made to cultivate with the skill and success of the Kachees and Koormees, the market gardeners of the country.*

In the discussions which have lately been carried on as to the increase in price of agricultural produce, much attention has been drawn to the increased cultivation of sugar. This increase is a definite thing, *vide* canal-irrigation returns:—

Area irrigated under sugar in:—

1866-67.	1868-69.	1870-71.	1873-74.
Acres.	Acres.	Acres.	Acres.
76,876.	97,555.	42,141.	130,284.

But the cause of it is not difficult to prove. The increase arose from the demand for Central India, which the connection of the Great Indian Peninsular Railway with the East Indian Railway

* I may be allowed to mention a case in point to show how the increased cultivation of one of these garden products resulted in diminishing the profits of the first speculation.

The Municipality of Cawnpore in 1867 began the cultivation of the edible sugar-cane. At that time there was very little grown in Cawnpore, and the gardeners across the Ganges in Oudh were deterred from competing in the cultivation, owing to the settlement operations then going on in that district. The first year the Municipality sold half an acre for Rupees 500, and several acres the second year at the rate of Rupees 200. They finished, however, in 1870 by only realizing about Rupees 50 an acre. This was entirely owing to competition. The assessment of the land in Oudh having been completed, hundreds of acres were put under cane of one sort and the other, and any quantity of it was obtainable in the Cawnpore market.

created. The connection of these two lines made it easier and cheaper for Central India to supply itself with sugar from the Ganges Valley, rather than from the Bay of Bengal and the Mauritius.

This increase, however, has a limit. In the first place, the area under sugar in the Central Provinces is increasing very rapidly, the Mauritius sugar has to bear an import duty which may any day be removed, and the Bay of Bengal can produce nearly five times as much per acre as the land in Northern India.

Even with the increased demand, the cultivator does not profit to the extent it would be supposed. The price of sugar per maund on the 1st January of each year, at Cawnpore, was:—

1869	Rs.	4	8	0
1870		3	13	0
1871		3	9	2
1872		3	10	3
1873		2	13	8

But as to the general staples of the country, I do not foresee any but temporary increase to the prices contained in the tables, nor do I know of any cause which might operate to bring about any permanence to such an increase.

And here I will touch upon the question of improved means of communication.

Whatever advantages a district can derive from variety of communication this one has enjoyed. Bounded on the one side by the river Jumna, and on the other side by the Ganges, it has always had the full benefit of river communication. It has always had one of the main arteries of the country, the old Mogul road, running right through the southern part of it, and since 1840 has enjoyed the advantages of the Grand Trunk Road running through the northern portion of the district. Since 1854 it has had its communication northward increased by the Ganges Canal, and since 1860 it has had the East India

Railway; for nearly fifty years it had one of the largest military cantonments in its centre; and after an interregnum of ten years, suddenly found itself possessed of the largest emporium of commerce in the Upper Provinces. But as far as I can see, or figures can tell, not one of these advantages appears in any way to have affected the price of the staples of the district; so far from its deriving any further advantage from its railway, speaking from an agriculturist's point of view, I know nothing which will tend more to keep prices at a level.* So long as there are thousands upon thousands of acres of grain-bearing lands yet to be brought under cultivation along the line of the Great Indian Peninsular Railway, there is no just cause to expect a rise in the price of grain (excepting from occasional famines).

The question, then, whether rents have risen with prices has already been disposed of. There has, in point of fact, been no rise in either. There has been no rise in rent, and there could not have been, because the settlement of 1840 left them so high that the margin left for the cultivator is as small as it can be. That there has been no rise in prices is apparent from Appendix B.

Added to this, we have the testimony of Mr. Reid, member of the Board of Revenue, in his evidence given before the East India Finance Committee. He says, speaking generally of the whole North-West:—

"There has been no improvement in the cultivation, except that derived from the extension of canal irrigation. The increased revenue to be derived from the reassessment will be the result of increased cultivation."

So, also, Mr. Ross Mangles, Sir R. Montgomery,

* Sir C. Wood foresaw this in 1861; at that time he wrote:—"The probable effect of the railroads would seem to be towards the equalization of the prices of produce in different parts of India, and a general improvement in the wealth of all classes of the country, rather than to give any peculiar advantage to the landholders."

and generally all other authorities, agree there has been no improvement in cultivation, only an extension, which I assert is simply the result of increased population; and it requires but little foresight to see that there is a limit, not only to the increase of our revenue, but a dismal prospect for the increased population.

These reasons prevent my assuming any considerable prospective rise in rents. They have also prevented any considerable attempt at enhancement through the process of law, from which I should be justified in asserting that the Courts refused to treat tenants with right of occupancy and tenants-at-will on the same footing.

As to the question of the population being up to the ordinary standard, I can only say it is considerably above it. By the Census of 1865 it stood at 502 to the square mile; by the last Census of 1872 it was shown to be 490 to the square mile. At any rate, the figures above quoted are considerably above the average of the whole North-West Provinces.

We next come to the question of the margin of culturable land yet to be brought under the plough. The following statement shows the state of the district thirty years ago in acres:—

Total Area.	Barren.	Total Culturable.	Cultivated.	Balance.	Per-centage of Balance on Total.
1,457,795 ...	514,443 ...	943,361 ...	786,254 ...	157,105 ...	16·61

I have no reason to suppose the new and more accurate survey will very materially alter the figures in the second and third headings. I have lately received from the Settlement Officer the result of the new survey of the only pergunnah, Bilhour, which is completed, and I here give it in comparative form:—

	Total Area.	Barren.	Total Culturable.	Cultivated.	Balance Culturable.	Per-centage of Balance on Total.
1840...	111,298 ...	29,008 ...	81,290 ...	59,079 ...	23,211 ...	28·55
1871...	111,433 ...	31,080 ...	79,853 ...	62,981 ...	17,372 ...	21·76

The surveyors, it will be seen, have not been able to convert the area of the barren land into culturable —indeed there is a slight diminution in the culturable area.

It is astonishing, however, to find that in a pergunnah which has for many years enjoyed the use of canal water, so large a per-centage of culturable land should still be uncultivated. This, combined with the fact of there being 505 people to the square mile in the pergunnah, only tends to corroborate my former assertion—there is little or no profit in agriculture in this district.

We will next turn to the question of whether rental assets, at present left to proprietors, are excessive or not.

Appendix C has been prepared with a view of showing not only the extent of transfer of property in the district, but also to endeavour to show what, under the most favourable view of the case, the profits are worth. It is a well-known fact that a landholder, even in hard times, will sell anything and adopt any shift rather than part with his land. When, then, we see the gigantic and *wholesale* transfers of land which have been going on ever since the cession, we can only adopt the inevitable conclusion—there can be little or no profit in landed property. Were the subject confined to single transfers, it might be suggested, knowing the unthrifty nature of the agriculturist, that these transfers must have in a great measure arisen from the owner's extravagance; but when one comes to examine the subject either by the light of the price paid per acre, of the number of years' purchase, or of the repeated transfers (for it will be observed the number of sales in columns 12 and 18 exceed greatly the number of villages or shares transferred)—the only conclusion is, the properties were hardly worth buying, *qud* profits, and are certainly such as to offer no inducement whatever to

invest capital in land. Indeed, I have been informed by several land speculators, they do not look so much to profits derived from the produce of the land or from enhanced rents; they expect, and as a fact do recoup themselves by, the interest on the moneys lent by them to the villagers (when once they get possession of a village in this way, they take care to keep other usurers out).. This interest, as I before explained, they recover chiefly in kind, and, added to the *sayer* products, such as grass, fruits, fish, timber, &c, makes the return from their investment pretty safe. It does not, however, add to the prosperity and even comfort of the villager; on the contrary, there is nothing which has so contributed to the demoralisation of the country as the transfer of land to these harpies.

In this table will be found a comparison of the price of land as it ruled during the three decades of the past settlement. It has been prepared either from inspection of actual sale-deeds, or, in their absence (many having been destroyed during the Mutiny), from the statements of the parties to the respective transfers. All cases which could not be corroborated in either of these two ways have been omitted from the register. Every precaution has been taken to fix the dates accurately in the absence of the deeds, by comparison with our office registers of mutations of property and the Canoongoe's* records in the pergunnahs. When I say it has taken nearly eighteen months to compile, I trust the Government will give me credit for having taken every means in my power to assure its accuracy.

In preparing the private transfer columns, I have omitted all mortgages, as they are for the most part mixed up with the sales; but where a sale has been anticipated by a mortgage, and only the final settle-

* A county registrar.

ment of accounts mentioned in the deed, I have included the original loan in the sale. The effect of this, no doubt, is frequently to show a higher price than that actually paid. Interest, and various other items, have all contributed to swell the whole before the final transfer took place. So, also, many of the sales recorded show a higher price than that actually paid. There are cases in which portions of villages have been transferred to other than shareholders, and a fictitious price entered in the deed of sale, with the object of defeating the claim to pre-emption by a shareholder.*

On the other hand, the sales under decree of Court, as a rule, represent *bonâ fide* transactions, and the number of land speculators in Cawnpore referred to by Mr. Rose, and still existing here, prevent land-selling by public auction below its value. In studying the statement, therefore, I am more inclined to accept the result of sales under decree of Court as representing the true state of affairs, and not those shown under private transfers. There is also another thing in the table which is calculated to mislead, but which combines to prove that the real value of land is even less than the figures show.

The number of years' purchase has been calculated on the assumption that the profits of an estate are equal to the Government demand; in other words, on the principle of 50 per cent. assets.

This has been done in consequence of the Government of India, in the matter of the Income-tax having decided that incomes from land are to be assessed on this assumption.

Taking this assumption to be correct, it will be found that the interest on the total investments of 30 years in land sold under decree of Court amounts

* I have cases on my register in which one-eighth of a village was sold for Rupees 200 to a shareholder, and another similar share to an outsider for nominally Rupees 2,000.

to Rupees 24-6-4 per cent. To carry it out further, the interest on the investments in the first decade amounted to Rupees 30-9-9 per cent.; in the second decade, to 24-2-5 per cent.; in the third decade to 19-12-1 per cent.; and yet land was only worth about four years' purchase during the 30 years, and in the best decade only worth five year's purchase. This, coupled with the fact contained in Appendices A and B, should satisfy most people that the profits have been greatly over-estimated.

Here, again, this unfortunate district has suffered from having been misunderstood in the same way it always has; because the city of Cawnpore is thriving, it has been assumed the district is also. If in Rohilcund, with a revenue rate of about Rupees 2, the profits of land are equal to the Government demand, under what possible assumption can the profits of this district be adjudged the same when the revenue rate is about Rupees 3?

It is true that the statement examined by decades shows an increase in the last decade in the price of land, whether tested by the value per acre or by the number of years' purchase. But, after all, the value per acre is a very uncertain test in a country where in some villages there is hardly an acre of waste land, and in others three parts are barren. (I have found it impossible to ascertain the exact amount of cultivated land transferred, owing to shares in villages held conjointly being so frequently sold.) The number of years' purchase is, without doubt, the best test, and the error in the assumption of the profits, amounting to 50 per cent. of the assets, does not affect this view of the case, or rather, affects equally the first decade as the last.

There has undoubtedly been an increase in the price paid for the land during the last decade. This may be in a measure owing to the depreciation in the value of silver, but also, as I believe, to the great

increase of speculation in land arising from the indirect profits of usury, which will have of course risen with the increased value of produce. I am perfectly satisfied it is not owing to any rise in rents, though it may have been effected by the breaking-up of waste land through the agency of the Ganges Canal and otherwise.

Whatever may have been the cause, it clearly is not owing to the increased profits of the cultivators, though in some cases it may have arisen from the purchaser being in a position to screw more labour out of the ryot.

So small really is the profit to be derived from land-holding, that it has become almost unsaleable, partly from the imposition of the 10 per cent. cess for local purposes, and partly in consequence of the uncertainty attending the impending settlement. Anyhow, it cannot be maintained that the country is in a satisfactory condition, or that there is any real progress or increase in the material wealth of the agricultural population, when land under the most exaggerated estimate is worth only five years' purchase.

On these grounds, then, I assert the share of the so-called rental assets, at present left to the proprietors, is very far from excessive, having regard to the amount of the Government demand, and taking into consideration all I have above stated as to the profits of agriculture, and superadding the fact that, good season or bad season, the proprietor has to pay the Government demand all the same.

The conclusion I arrive at, after considering the subject in all its bearings, is that no advantage is to be derived from leaving the assessment open to readjustment during a term of temporary settlement; certainly the lessons of the past do not point to any, nor the *status* of the agricultural population offer any hope. (I do not say we are the cause of this unfortu-

nate position, but I do say our system has tended to keep them in the same hopeless state we found them.)

I regret I cannot join in the sanguine expectations of those who look forward to a great increase in the value of land arising from the extension of canal irrigation.

The engineers who first laid out the Canal thought of little else but the fertile parts of the country, and as a consequence, took it through those tracts which were already sufficiently irrigated by wells. The advantage of this to the agriculturist was not very apparent. It raised the spring-level through the country, and caused all the wells which were not built with masonry to fall in; it covered the hitherto fertile soil in many places with silt; and the demand being greater than the supply, many villages had to be content with insufficient watering. They also entirely overlooked the natural drainage of the country, and built the canal right across it. The result has been to turn a large quantity of arable land into barren waste. This is, however, now to be rectified; a scheme is on foot for re-aligning the whole of the irrigation system in the Cawnpore district, which means, taking up fresh land, the abandoning the old lines rendered useless for cultivation, and increased expenditure of Government revenue.

An experience of seven years in a canal-watered district satisfies me that canal irrigation, unless accompanied by drainage, is more injurious than otherwise. The Canal Department may do a great deal towards this, but nothing they can do will obviate the necessity of the proprietors doing a great deal more for themselves; this means the investment of capital, in other words, means the using up any extra profit they may have realised from the use of canal water.

Appendix D shows the result of one year's experiment, conducted last year, to ascertain the compara-

tive effects of canal water, well water, and no water at all, on two of the staples of the district. I am free to confess the season was not a satisfactory one for such an experiment, nor can it be considered conclusive, owing to the continual showers of rain in the cold weather, which brought the products of the unirrigated land very nearly to an equality with canal irrigation. It, however, shows one thing, and that is, that well water is more productive than canal water. This is a fact well known to agriculturists, but as the cause of the difference is still a matter for speculation, I refrain from discussing it. All, however, are agreed that canal-irrigated land is apt to become water-logged,—I conclude from the difficulty of restricting the amount used; and whenever rust appears among the cereals, it is worst in this kind of land.

From this statement, however, I make the following deduction:—Admitting the increased value of a village which has been enabled by the canal to water land hitherto unirrigated, and to bring under cultivation land which has hitherto been uncultivated, I am of opinion that Government can afford to give up the difference between the increased value and the water-rate; for, as in the case of the years 1870-1, Providence supplied the irrigation, which brought the crops to perfection, and not the canal; and if in every five or six years there comes a year in which canal water is unnecessary, surely the cultivator is entitled to share in the blessing of Providence as much as Government. Indeed when one takes into consideration the fact that the area of canal-irrigated lands is larger than the carrying capacity of the canal can supply, and that as a fact it does not give a full supply over the whole area, it is unreasonable both in the Department and Government to claim every advantage,—I mean such advantage as they have had no share in bringing about.

It is true that, in the protection the Canal affords against famine, the advantage of it is incalculable. But it cuts both ways; if it protects the agriculturist against famine, it also protects Government against remission of revenue.

For my own part, believing, as I do, that the only increase derived from canal irrigation is the rent on new cultivation, which otherwise could not have been brought under the plough, and which is, as a rule, poor land, situated at such a distance from the village site as to be incapable of sharing in the scant manuring the home fields get, I consider the water-rate as at present fixed quite sufficient, or, in other words, as much as the cultivator can afford to pay. The differential rates between garden and ordinary cultivation are quite sufficient to protect the canal from loss; and in view of the advantages of a perpetual settlement, any loss incurred from any of the above-mentioned sources should be accepted by Government.

That we have some of the most fertile soil in the world will hardly be gainsaid, when one considers the crops which are raised by the climate and soil unassisted. I say unassisted, because the amount of manure used, having reference to the whole cultivated area, is a mere nothing. Appendix E shows that grain for grain, this soil and climate will produce cereals as heavy and as good as the English climate, and unassisted will yield within a third of what high farming raises from English soil. The difference is manure and science—manure and science are capital.

Whichever way one turns with a view of increasing the productive resources of the country, one has to face the difficulty of want of capital. And if my tables of the cost of cultivation and the prices of the last fifty years are anywhere near accurate, it is hopeless, in the present state of affairs, to expect the investment of any capital in the soil.

The simplest form of settlement which occurs to me, as applicable to districts in which the cultivated portion of the culturable area already amounts to 80 per cent., would be to take the present revenue of each village as the standard of the Government demand, at the average price of agricultural produce at the principal mart of a district, for the past ten or twenty years. I would fix the assessment for the period of ten years, and at the end of that time, a fresh average should be struck of the prices during that period, and a rateable increase or decrease made in the Government demand accordingly.

I make this proposition not with any intention of abandoning my original position, that the value of the labour expended is more than the profit derived from the land; but because I feel that were a fresh inquiry to be instituted, and a settlement made on the basis of the real profits of cultivation, it would take years to complete it with the available staff, and could not even then be done satisfactorily, on account of the want of principle we have to contend with in our native subordinates, and because I believe the Government, in abandoning all claim to assessments on the balance of the culturable area, and the increased assessment which is always claimed on irrigated land, would offer inducement to the proprietor to break up this land, and to the cultivator the inducement to increase his produce by sinking wells.

In every district it would be easy to select the principal staples from which the average of prices would be struck, and in any enactment which might be necessary to regulate this new state of affairs, a clause might be entered to provide for the event (a not very probable one), of a change in the staples of a district.

All right-of-occupancy tenants would have their rents raised or lowered according to the same ratio,

and there need be no fear of any confusion or alarm arising in their minds, for every native, from the highest to the lowest, always keeps himself informed from day to day of the prices of all food-grains, which are the staples of the country.

One great obstacle to anything like fixity of demand has always been the effect the canals might have, if subsequently introduced into a district settled in this way. I do not apprehend myself there would be any great difficulty in arranging for this by water-rate; the system of levying one is already in force, and instead of calculating the profits derived from its introduction and assessing them to land revenue, as is at present the practice, in addition to the levy of a water-rate, I would suggest an addition to the water-rate.

But I do not think the country is rich enough to pay for the cost of building gigantic irrigation works, which are prevented from being remunerative, partly by the low price of the crops cultivated, partly by the fact that irrigation, unaccompanied by manure and drainage, *i.e.*, the investment of capital, cannot do more than raise the ordinary staples of the country, and partly by the enormous distances the raw produce of the country has to travel before it can find any but a local market.

I should much prefer the more simple and less expensive arrangement of offering inducements to the people to arrange for their own irrigation by means of wells and reservoirs. The history of the past is the history of to-day. Mr. Bird writes, in 1832:—

"I know from the statements of substantial cultivators themselves, men who have held the same tract of land for 30 years, that they would sink masonry wells, and otherwise lay out capital in improving the land and raising more costly products, were it not for the conviction that the zemindars would immediately demand an increase of rent, which would make their outlay a loss, instead of a source of profit."

I know this is the case now, and I further know that the zemindars oppose well-sinking now, partly because the sinking of a masonry well is looked upon by our Courts as a proprietary act, and partly because they know that in each revision of settlement a masonry well means increased assessment.

We know from Colonel Baird Smith's report on the famine of 1861, that the area irrigated by wells in the North-West Provinces equalled that irrigated by canals, the cost in the former case being nothing to Government, and in the latter a permanent charge on the revenues of the country. We know also, from the same sources, that the villages in which there were wells suffered hardly at all from the famine-pressure; and we also know, as I have above stated, that the area of canal-irrigated land is larger than the carrying capacity of the canal, and that in famine times the water is only sufficient to raise half and quarter crops.

It has also been ascertained that, owing to the recurrence of settlement operations, and the additional rates charged on irrigated land, masonry wells have, to a great extent, been abandoned in favour of temporary wells,—mere excavations in the soil, which are easily concealed from the settlement officer; that masonry wells can and do irrigate a much larger area than temporary wells, and that our system of temporary settlements does indirectly contribute to the decrease of irrigation.

The appearance of the efflorescence of Reh has shown that canal irrigation is likely to be injurious when unaccompanied by drainage, and that even when the drainage of the country has received the attention which it requires, there will still remain much to be done by private hands which necessitates capital, and which all authorities agree has not hitherto been invested in improvements of cultivation.

It cannot be too strongly insisted on, the average prices of the real staples of Northern India are such as to preclude their paying even the cheapest forms of transit for long distances. It has been argued that canals will give a cheaper form of transit than rail, but seeing that the produce in average seasons cannot pay for long transport even by river, I do not think that we are justified in expecting that the returns from canal expenditure would be much benefited in this way; and, moreover, the Government is the *guarantor* of the Railway system; to whatever extent profits would be secured by the Canals to a greater or less extent, the Railway returns would suffer. Either result would entail a charge on the Imperial Revenues.

Much astonishment has been frequently expressed at the smallness of the returns of the East Indian Railway. To those who, realising the low value of the staples of the country, and living on the banks of the river, have been enabled to watch the competition which exists between the rail and the river, it is not a subject of wonder.

A boat, of course, costs money, but, as a rule, does not belong to the boatman; it is generally hired from the owner, who gets his return in various indirect ways,—by interest on advances to the boatmen, by small ventures of his own free of freight-charges, by being his own insurer, and many other methods.

The boatmen live on rice, largely supplemented by fish, which they catch themselves; and if, as I assert, they are, as a rule, content to gain a bare subsistence, it is clear no large expenditure of capital, such as a railway necessitates, can compete with such cheap carriage. As a fact, it is not able to do so; and much of the discredit which was cast on the railway management some few years ago arose from a want of a proper appreciation of these facts.

It has been abundantly shown that canals, with

one or two exceptions, do not pay their way by irrigation alone; and unless the boats had to pay tolls, which they do not, on the upper part of the rivers, where canals are only possible, I do not see how the revenue would be saved a further charge for navigation facilities.

I have referred to the movement of the population, as a probable and prospective cause of the rise in the price of labour. Now, there is no doubt that one of the effects of the increased population has been the increased area under cultivation, and *pro tanto* increased revenue. But, as I have before said, there is a limit to this, and in the densely populated part of the country we have already reached this limit, or nearly so. The population, however, in despite of famine, infanticide, and disease, still continues to increase in a most alarming manner, and all the efforts of a civilised Government are exerted, and vigorously so, to protect and foster this increase.

The question, therefore, presses on the Government under whose beneficent rule this increase has arisen how to provide for its superabundant population. It is admitted on all hands that the productiveness of the land can only be increased by the investment of capital. I have endeavoured to show that under the present system capital cannot be enticed on to the land, and that the investment of capital by Government in canals only tends to add to the weight of the debt of the country, without proportionately benefiting it, and the only resource left to the Government appears to me to move a portion of the population on to the lands under its control, which at present are waste.

The Government have already begun a system of emigration to Assam and Burmah, and though it is early yet to measure in any way the success of the experiment, I cannot but feel grave doubts whether this form of emigration is likely to prove any perma-

nent benefit. There is a large demand for labour in those countries at present, and so long as that is the case the emigrants will do well, and the surplus coolie population of our towns will be provided for. But this is not colonisation, nor a system calculated to develope the resources of the country, in the way in which it is desirable to meet the case of the super-abundant agricultural population.

I have seen the record of an attempt which was made of the nature I am about to propose, in the district of Nimar. A settlement of Brahmins from Bithoor, after the death of the Peishwa, was started under very many favourable circumstances. It failed, however, and the cause given was the removal of the local official who had organised the scheme, and also the imposition of forest dues.

I am, however, under the impression that Brahmins are not likely ever to make good colonists; they are essentially lazy, bad cultivators; the principle of letting them hold the land rent-free for the first two years was wrong; it was an inducement to fraud (*i.e.*, throwing up the land directly they had to pay rent), and there was not that inducement to make the most of their land which the pressure of a small rent would give.

If I had to organise a scheme of this kind, I should propose to select a native officer of considerable standing, who was known not only to be master of the intricacies of village life and agriculture, but also to be in great esteem amongst his own people. With him should be two intelligent assistants of his own choice, and a native surgeon.

All the officials required beyond this would be a jemadar and two chuprassies for each officer.

The first attempt should be made with not more than 100 families under each officer. To each family should be allowed 25 acres, with the prospect of 25 acres more after five years, or more, provided the first 25 acres were brought really under cultivation.

For the first five years each family should pay to Government one-third of the produce of their land, which would either be stored against bad times, or sold, as circumstances might determine.

In the fifth year, money rents should come into force, based on the value of the Government share of the produce for the past five years, and at the rate of one-third of the net return of each farm. This rent should be subject to revision every ten or twenty years on the same basis, and the holdings, subject to this condition, should be confirmed to the possessors for ever.

The chief officer should be empowered to return to their own province any family which either from ill-health, neglect to cultivate, or bad livelihood, should become a burden to the colony during the first five years.

During the first year it would be necessary to supply food for the whole colony, and with this object, the chief officer would have to provide a store-house for each township, which should afterwards be utilized for storing the Government share of the produce.

The amount of food supplied to each family would have to be accounted for, and would form a debt against that family, repayable within five years.

It would be necessary in the first instance also to supply each family with one pair of bullocks, half of the cost price of which should be recoverable also within five years.

The colony should be started as soon after the beginning of the cold weather as possible, so as to give the emigrants ample time to house themselves, select their ground, and prepare for cultivation before the rainy season sets in.

Amongst the families it would be necessary to secure representatives of all the usual village artizans, in short, each 100 families should contain all

the elements of a complete village community, with the exception of the village banker. In his place I would put the chief officer, and by authorizing his making small advances to men in difficulties, and only charging 5 per cent. interest, would do away with all chance of the colonists getting into money-lenders' hands.

In point of fact, the chief officer would keep a Monte de Piété on a small scale.

In the second or third year, small premia might be offered to the colonists to go during the slack part of the year to their own country, and persuade their brethren to come and join them, the premium to be paid on the arrival of the new emigrant, and the approval of him by the chief officer.

I am convinced in a very short time it would be unnecessary to offer premia; the difficulty will then be to provide for the number of new comers.

That the people of India will move under pressure I have no manner of doubt. Previous to the annexation of Oudh, I saw many instances of it, and it is a well-established fact that a great deal of the new cultivation in the districts of Goruckpore was effected by emigrants from Oudh.

The fact is, a native does not object to moving, unless it is beyond the sea, and during the past ten years I have seen large gangs of coolies going of their own accord from Oudh and from the Cawnpore districts, into the Central Provinces and the Bombay Presidency.

The site I should select for starting the first colony would be somewhere in the Mundla or Hoshungabad districts of the Central Provinces. But of course this would be a matter which could only be settled after a very careful inspection. Great attention to the salubrity of the spot selected would be essential, as anything like an outbreak of disease during the first years would be fatal to the scheme.

As regards the cost, it is difficult to form anything like a reliable estimate. The chief officer would have to be paid a salary equal to the highest class of native officials, and should be subordinate to the Chief Commissioner only.

I suggest the following rough estimate, in order to give some idea of the feasibility of the scheme:—

Chief officer	... Rs. 12,000	per annum.
Two subordinates	... 3,000	—
Two jemadars	... 300	—
Six chuprassies	... 600	—
Houses for all	... 3,300	—

I calculate this would cost the Government in five years about one lac of rupees, which at 4 per cent. would give an annual charge of 4,000 Rupees.

As regards the purchase of bullocks, the Government must be prepared for a loss of, at least, 10,000 Rupees, and they would also lose something on the food allowance the first year. But they would each year be in receipt of some return, and by the end of the five years probably more than the 2,700 acres first proposed to be taken up would be under cultivation. It is, however, quite impossible to estimate what the return would be. I should prefer to estimate a loss on the first five years of, at least, 15,000 Rupees, in addition to the charges for establishment.

Looking at the scheme as a whole, however, £20,000 would be well laid out in an endeavour to relieve the present over-populated district, and it is quite probable, if the scheme succeeded, that the actual charge would not equal half that amount.

Finally, I have endeavoured to show how, with the best intentions, the change from native to British rule was not effected with anything like the happy result which was anticipated; that the so-called rent-rates are really forced contributions, and not rent in the ordinary acceptation of the term; that if agricultural labour had to be paid for, cultivation,

under the present system, could not be carried on at a profit; that the state of the average cultivator is one of hopeless insolvency and misery; that prices in the old districts, where communications have always existed, have not risen; that the increased revenue derived from reassessment is only the product of increased, not improved, cultivation; that the population per square mile is excessive; that 70 years of British rule results in landed property being barely worth five years' purchase; that canal irrigation is not without its drawbacks, and is a permanent charge on the resources of the country; that the country is not rich enough to afford it, whilst it can afford to offer inducement to the people to provide for their own irrigation; I have suggested a form of permanent settlement, and a scheme of internal emigration, and it remains but to inquire why should the landed interest bear all the burden, whilst the trading interest reaps *all* the advantage. The agriculturist has no property to protect; he can't afford to spare his children for educational purposes, he wants no postal service, and as for road, if left to himself, he can drive his apology for a cart across the roughest country, without the slightest inconvenience. Yet he has to pay for police, education, the post, and roads, in addition to his rent, and the native trader, who pays absolutely nothing towards the Government revenues (as the amount of foreign duty-paying goods consumed by him is a mere nothing), profits to an unprecedented extent by the protection of the British rule, the police being maintained for the safeguard of his property, the postal service and communications to enable him to carry on his business.

But then he forms part of the body of educated people, and consequently, when any attempt is made by the Government to force him to contribute towards the exigencies of the State, he immediately

puts the Press in motion in his interests; he lives, generally speaking, in constant intercourse with the European, both official and non-official, whilst the agriculturist rarely goes near either. It is he who talks of disaffection, and the political danger of direct taxation, when, if the truth were known, he has absolutely no fight in him, and when the rebellion was going on, was in far more fear of his own countrymen than of the English. They are a class who could not exist for a day but for our protection, and yet they have cleverly managed to impress the Government they cannot be taxed without peril to our rule.

And yet that they can be taxed, and taxed directly, I have shown in the city of Cawnpore, where the whole municipal taxation is levied by a direct tax, expressly designed to make the rich pay and exempt the poor. For the first two years they talked big and petitioned, but when they found the Government would not listen to them, they accepted it as a stern reality, and for the past nine years this tax has been in force, and collected without the slightest difficulty. Had there been an equal prospect of permanency about the Income-tax, we should have had it collected without a murmur, but agitation was encouraged by the fact that it was only imposed from year to year.

The only remedy is to limit the Government demands, and by special enactment reduce the proprietors' claim on cultivators, with right of occupancy in proportion to it. Then settle the Government demands in the form of perpetuity I have suggested, and very few years will pass over our heads before a marked change will come over the people.

In 1861, Sir W. Muir recorded his views in favour of a permanent settlement, and so exhaustive and able an advocacy leaves little or nothing to be urged in addition.

The Government would save not only the expenses incurred in the periodical revision, but also the greater portion of the cost of collecting. For were the boon granted, one of the conditions should undoubtedly be that the proprietor must pay the Government demand into the Head-quarters Treasury himself, in the same way as they have to do in Bengal.

The zemindars and ryots would be relieved not only of the temptation to waste money in attempting to purchase surreptitiously some hoped-for exemption, but also from the exactions of the army of native officials revision of settlement brings into the field.

And by inducing them to make their own irrigation arrangements, the enormous Canal establishment might be cut down, and the Public Works Department reduced.

There is, however, another benefit which, though not mentioned by Sir W. Muir, I hold to be of incalculable value, and that is the being assured of the permanent value of their property. Sir W. Muir has shown most lucidly, in the commencement of his minute, that the landholders of these Provinces have already got perpetual fixity of tenure. It remains for me to point out that at every recurring revision of settlement, the value of the property is practically in abeyance, not only until the new assessments are given out, but until all chance of a revision of the revision has passed away. This is from five to ten years, according to the size of the district, and according to the number of revisions of revision which are ordered. Take, for instance, Saharunpore; the settlement of this district, with its three revisions, took over ten years to complete; Goruckpore took very nearly the same time, and was revised several times; so also Bolundshur and Mozuffernuggur have suffered under revisions of revision for lengthened periods, though not, perhaps, quite so long as the two other

districts. I know no reason why other settlements, which have been recently completed, should not also require revision. Whatever the period may be which elapses between the commencement of a settlement and its final sanction, I think every one must agree it is an intense hardship on the proprietor being unable to get or demand the full value of his property—indeed it has no value, nor can it have until it is known what the future assessment is to be, and then only when that assessment is unchallenged. There is always the fear of revision for several years after the assessment is anounced.

This is in reality one of the most serious evils of temporary settlement. As I have noticed above, land is at the present time unsaleable in the Cawnpore district, chiefly from this reason.

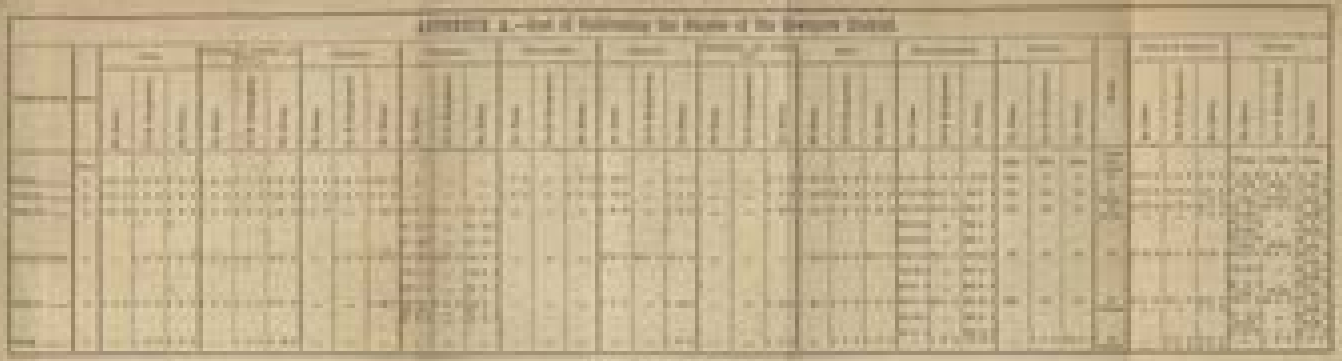
I omit all notice of that which his Honour has so ably exposed—the wilful depreciation of property which goes on whilst settlement operations are impending. I join heartily with him and Colonel Baird Smith in the belief that a fair and equable assessment fixed in perpetuity would encourage the investment of capital, and can testify to the fact that the present system of temporary settlements acts as a bar to those ordinary improvements which are within the means and skill of the agriculturist to employ.

The fact is, capital in this country, as everywhere else, is always looking for an outlet. I hold the custom of burying rupees in a pot is fast dying out; trade in country produce and money-lending have taken its place, and the profits from both these sources are so great, that it has become necessary to offer some other inducement to get money on to the land. Can there be any greater proof of this than is contained in Appendix C?

Too great stress cannot be laid on Sir W. Muir's objection to the alternative of long settlements. There is a charm, as he and Mr. Mill rightly say, in

the words "for ever"—such a charm in the ears of a native as few of us can appreciate, which, if combined with a reasonable reduction of the Government demand, would diffuse a spirit of contentment and satisfaction over the whole country, and for the sake of which we should be justified in giving up all prospective advantages, and which contentment and satisfaction will so contribute to the material wealth of the country, that when from the fall in the value of precious metals, or other causes, we are forced to turn our attention to other sources for revenue, we shall not find the slightest difficulty in raising it.

APPENDIX A.—List of Publications for Review of the Surgeon General.



TABULAR STATEMENT.—Continued.

A

Acceptable forms and data prepared by the Medical Department are shown in these Appendix C and their following details are:

Abdomen.—Pain and injury. Bleeding and in a deep or in the abdominal cavity, and also of hydrocele, the testicles, epididymis, vas, and other parts of the genital organs. Diseases of the testicles, epididymis, vas, and other parts of the genital organs. Diseases of the testicles, epididymis, vas, and other parts of the genital organs. Diseases of the testicles, epididymis, vas, and other parts of the genital organs.

Abdominal wall.—Wounds, injuries, and diseases of the abdominal wall, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs. Diseases of the abdominal wall, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs.

Abdominal viscera, injuries.—Wounds, injuries, and diseases of the abdominal viscera, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs. Diseases of the abdominal viscera, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs.

Abdominal viscera, other injuries.—Wounds, injuries, and diseases of the abdominal viscera, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs. Diseases of the abdominal viscera, including the peritoneum, the omentum, the mesentery, the liver, the spleen, the pancreas, the kidneys, the bladder, the rectum, the anus, the genitalia, the testicles, the epididymis, the vas, and other parts of the genital organs.

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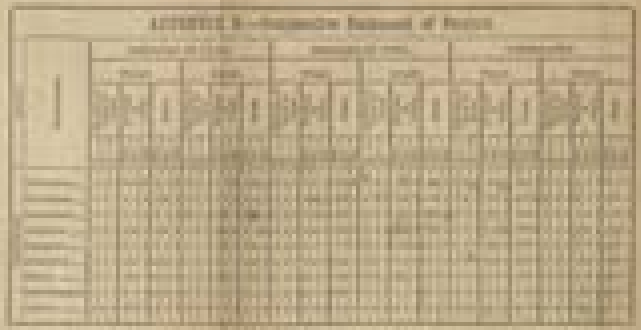
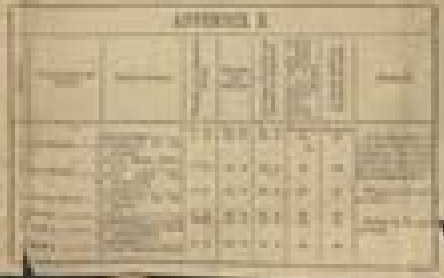
APPENDIX A.



APPENDIX B.—Comparative Statement of Prices.

APPENDIX C.



APPENDIX D.

ON THE PRACTICE AND RESULTS

OF

IRRIGATION IN NORTHERN INDIA.

Pht. 5

BY

COLONEL W. H. GREATHED, C.B., R.E.

WITH AN ABSTRACT OF THE DISCUSSION UPON THE PAPER.

EDITED BY

JAMES FORREST, ASSOC. INST. C.E.,
SECRETARY.

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THE INSTITUTION OF CIVIL ENGINEERS.

No. 1,350.—"On the Practice and Results of Irrigation in Northern India." By Colonel W. H. GREATHED, C.B., R.E., Chief Engineer of Irrigation to the Government of the North-Western Provinces.[1]

As the construction and application of works of Irrigation in India have opened a large field for hydraulic engineering, which will extend from year to year, it has been thought that a brief account of what has been done, and of what is now doing, in that portion of Upper India in which artificial irrigation has been practised for the longest period, and on the largest scale, will interest the Members of the Institution of Civil Engineers, and others concerned in the welfare and advancement of our Indian possessions.

A passing reference will be made to various large undertakings in other provinces of India; but the Paper will be principally confined to a description of the works which have been and are now being constructed under the Government of the North-Western Provinces.

In the first instance, attention will be directed to the tract of Hindostan lying south of the great Himalayan range, and included between the river Bhrahmaputra on the east, and the rivers which merge into the Indus on the west side. The principal geographical features of this region are the plain drained by the Ganges and its tributaries flowing south-east; the plain traversed by the Indus and its tributaries flowing south-west; and the intervening water-shed, which, disregarding minor variations of character, may be generally spoken of as the table-land of Central India. The length of the line along the foot of the Himalaya to the North of Hindostan is 1,500 miles; the distance from north to south measures 26° of latitude, and the country is four times as large as France in area and in population. The plains of the Ganges and of the Indus rise gradually, from the level of the sea at the mouths of the great rivers, to about 1,000 ft. and 1,100 ft. at the points where the Jumna and the Indus respectively leave the mountains.[2] The highest level of the central table-land is about 2,000 ft. above the level of the sea, and it stands nearly 600 ft.[3] above the plain of the

[1] The discussion upon this Paper extended over portions of two evenings, but an abstract of the whole is given consecutively.

[2] Attock, 1,100 ft., G. T. S. Jumna debouche 1,000 ft., Strachey.

[3] Height of plain at Allahabad . . . 400 ft. above sea-level.
Height of table-land opposite Allahabad 1,000 „ „ „

Ganges, which runs between its north-eastern face and the Himalaya.[1]

The intense heat of the southern border of the continent of Asia, when subjected to the maximum power of the sun's rays as it attains its northern declination, creates a current at the earth's surface from the south during the summer, which, blowing over a large expanse of ocean within the tropics, becomes highly charged with vapour; while in the winter the rapid cooling of the land as the sun passes south of the equator, causes a corresponding current from the north to the hotter southern latitudes. From causes, which for present purposes it is not necessary to investigate, these currents respectively become south-westerly and north-easterly winds in the Indian seas north of the equator. The term 'south-west monsoon' is generally used to express the season from the beginning of May to the end of October, during which the winds for the most part blow from that direction; and the term 'north-east monsoon' is applied to the autumn and winter half of the year.

Very near the west coast, the table-land of Central India rises to a height of from 2,000 ft. to 5,000 ft. above the sea, and terminates abruptly in a scarped face, called the Western Ghāts. During the south-west monsoon a great rainfall takes place upon these hills, which are generally higher than the adjoining table-land; and though their summits are not continuous, only a small portion of rain penetrates and falls upon their eastern side. As far, therefore, as the break in the line of Ghāts, which is made by the mouths of the Nerbudda and the Taptee, the summer rainfall on the coast line continues great, and the fall on the table-land is scanty. The area so affected includes the greater part of the Madras Presidency, the plain of Mysore, and some part of the Nizam's dominions.

It would seem that the rain-clouds ascend the valleys of the Nerbudda and the Taptee and break on the high land which borders them; in consequence, the country called the 'Central Provinces' has more rain than the table-land which is shut in by the Western Ghāts. Traveling up the west coast of India, the rainfall rapidly decreases both on the coast and in the interior; until at the mouths of the Indus there is practically none at all. And over all this region the south-west wind still blows as freely as in the regions further south. The rainfall on the eastern side of

[1] In compiling this Paper advantage has been taken of a map prepared by General Strachey and Dr. Brandis, for the recent meeting of the British Association, showing the average rainfall over the surface of British India.—W. H. G.

the peninsula during the south-west monsoon is estimated to be as follows:—

	Inches.		Inches.
Palamcottah	10	Vizagapatam	39
Trichinopoly	20	Cuttack	47
Madras	39	Calcutta	56
Masulipatam	29		

At the southern point of India, and in Ceylon, the south-west monsoon brings but little rain. The amount, however, increases up the eastern coast of the peninsula; and on the east of the Bay of Bengal there is a rainfall equal to that on the Western Ghāts, extending over the country between the sea and the Himalaya, which, at the head of the bay, are not very far apart.

Thence, in the plains of the Ganges, the rain constantly diminishes as the distance from the sea increases, and likewise as the distance from the Himalaya increases, until to the westward, the rainfall, even at the foot of the Himalaya, is greatly attenuated. General Strachey and Dr. Brandis have grouped the surface of Hindostan into the arid zone, in which the annual fall of rain is less than 15 inches; the dry zone, in which the rain does not exceed 30 inches; and the wet zone, which has a rainfall everywhere of not less than 75 inches.

The agricultural conditions in the several parts of India are influenced by these varying degrees of moisture as well as those of soil and of temperature. The temperature ranges from tropical in the south, with an approximately uniform heat, to semi-temperate in the north, where the summer and winter are sharply defined. The change in the two seasons becomes greater as the latitude increases.

The Madras Presidency is traversed by great rivers, the Kistnah, Godavery, Cauvery, Coleroon, Pennair, and others, falling into the Bay of Bengal. These rivers rise in the Ghāts, and consequently carry during the south-west monsoon great volumes of water, whilst the region through which they flow is generally dry. The table-lands, when unirrigated, produce nothing but the lowest class of cereals, which the rainfall generally suffices to bring to maturity. But a large amount of irrigation is effected from tanks, which husband the south-west rainfall in sufficient quantities for the cultivation of rice; and it appears that, under the even temperature of the tropics, rice can be cultivated irrespective of season so long as the water lasts. As a rule, irrigated land is sown with rice, and by the time that crop is matured there is no water left for other purposes; so that even the irrigated

lands bear but one crop a year. Recourse cannot be had to wells for the purpose of irrigation, because of the depth of the water from the surface of the land, and hence a large extent lies waste, and is in effect an unproductive 'bush.'

It is probably owing to the broken character of the surface of the country, which is scarred by the outcrop of rocks, that advantage cannot be taken of the waters flowing in the great rivers to irrigate the uplands. As it is, throughout the Madras Presidency, canal irrigation is confined to the deltas formed at the mouths of the great rivers. No large channels are necessary therefore for the distribution of water, nor are bridges of communication requisite, because carts are not employed in the delta country; moreover, there is no considerable velocity of current to injure the banks of canals. All of these circumstances tend to cheapen construction and maintenance. The areas irrigated in the deltas of the Madras Presidency are as follows:—

District.	Acres irrigated.
Godavery	225,032
Kistnah	144,591
Tanjore	698,142
Nellore	176,927
Total acres .	1,244,692

Moreover the practice of agriculture brings nearly the whole cultivated area under crop at one time, when the rivers are at their height. It is, therefore, only necessary to raise the flood-waters slightly by weirs to create the means of irrigation, which cease when the monsoon passes off, and they are no longer required. But whilst water is obtainable it is very abundant, and, in consequence, the irrigation is conducted under favourable circumstances. The total area classed by the revenue authorities as irrigated amounts to 3,300,017 acres, nearly one-fourth of the cultivated area. After deducting the area supplied by canals, there remains a residue of upwards of 2,000,000 acres, principally irrigated from tanks.

In the Nizam's territory and Central India the conditions of soil are much the same as in Madras east of the Ghāts, but tanks are not so frequent. In the shallow and argillaceous soils the rainfall of 30 inches or 40 inches brings on crops of millet; whilst the black cotton soils, composed generally of decomposed trap, having a great faculty of retaining moisture, produce the cotton crops of the Berārs, with the aid of 43 inches of rain.

In Lower Bengal the terrible famine of 1866 led to the construction of a large system of canals in Orissa, apparently, not yet much used. A second scarcity will teach their value, even if the people do not sooner learn that high farming by means of abundant water leads to profitable increase of crops in ordinary years.

The rest of Lower Bengal has no State irrigation, and probably it has no great need of it. The greater part of the country is deltaic, the rainfall is considerable—being from 65 inches to 75 inches—the population large, and water so near the surface generally, that it can be raised by simple native mechanical appliances. In Eastern Bengal the natural rainfall suffices for all requirements.

North of the Lower Ganges, which traverses Bengal diagonally from N.W. to S.E., the country is profusely watered by about 150 inches of rain, and by numerous great rivers which drain into the Bay of Bengal. Fibres, such as jute and hemp, rice and oil-seeds, are produced in great abundance in these regions, and they furnish the chief exports of the Calcutta market.

Higher up the Ganges is the rich province of Behār, which enjoys, what for India is considered, a temperate climate. It has a good loamy soil, and a liberal rainfall. Indigo is extensively cultivated; wheat, barley and oats are successfully raised. The country is verdant throughout the year, and large quantities of cattle, sheep, and horses are reared on the excellent natural grasses. This description applies principally to the districts on the left bank of the Ganges, which obtain more rain than those on the right. Canals are, accordingly, being made from the Soane river, designed to develop the cultivation of sugar, rice, indigo, and cotton. Other canals from the river Gunduck are under consideration, which would secure indigo against all risk, and greatly increase sugar cultivation, now effected to a limited extent with well-water.

In the *Benares* division of the North-Western Provinces, the northern districts are liberally moistened as in Behār, whilst those more remote from the Himalaya have only a slight advantage in rainfall over the average of the North-Western Provinces proper. There are no existing State works of irrigation in the Benares division; but a scheme is contemplated for irrigating the southern districts from a great series of distributaries taken from the river Sardah, in the province of Oude.

North-Western Provinces.

In the North-Western Provinces (Plate 6)—exclusively of the Benares division—irrigation may be described as consisting of three zones:—

1st. The Sub-Himalayan Tract, north of the river Rāmgunga, which is generally copiously watered by the rainfall on the mountains, and by numerous small rivers flowing southwards out of them. Most of these small rivers dry up soon after the termination of the rainy season, but on a great part of the length of this tract a deposit of sand and boulders, forming a continuous belt about 15 miles wide, creates a vast filter-bed which, being fortunately bordered on the down-hill side by a band of clay of considerable width, becomes a covered reservoir. The natural pressure, augmented by the rapid slope across which the filter-bed lies, appears to force water under the clay, and produces a line of springs, on the other side of the clay band, which, feeding numerous small streams, refresh the country. The local name of the belt of boulder is 'Bhābur,' and the name of the tract which it waters by filtration is 'Terai.' The drainage runs southwards to the Rāmgunga and Ganges.

2nd. The 'Plains,' being the area included between the Rāmgunga and the Jumna rivers, and including the Muttra and Agra districts on the right of the Jumna. This great tract has a loamy upper soil, varying from sand in some parts, to light clay in others. But fine sand is generally found at no great depth throughout this formation. The drainage runs from N.W. to S.E., parallel to the main rivers, the Ganges and the Jumna, which embrace nearly the whole area.

3rd. The province of Bundelcund, which slopes from the high table-lands of Central India northwards towards the Jumna. The lands bordering the rivers are dry and stony, and higher than the intervening basins, which consist generally of rich black cotton soil. There has been a great upheaval of the region near the foot of the table-land; and trap and granite rocks crop out freely, forming isolated hills of fantastic shapes.

The climate of the North-Western Provinces is exceedingly dry, and hot westerly winds prevail, during the months of April, May, and June, over its whole surface, excepting the Sub-Himalayan zone. During that season vegetation of unwatered plants is apparently suspended, except in the case of the melon tribe, which thrives on the dry sandy beds of rivers, hot enough to blister the feet. The rain-clouds of the south-west monsoon seem to travel

up the valley of the Ganges, and reach the North-Western Provinces about a fortnight after rain has commenced in Calcutta. Marvellous is the sight and delicious the sensation when the rain sets in. Nature, which seemed dead for three months past, bursts suddenly into life; it is a sober statement and no traveller's tale, that plains at evening brown with the dust which has been their habitual covering for months past, acquire a distinct green tinge by the morning which succeeds the first night's blessed fall of rain.

After the first twelve hours of down-pour, every plough in the country is upon the lands, and the season of agriculture has commenced.

Without saturation, the 'pan' of indurated soil which underlies the dust cannot be broken by the wooden ploughs and puny cattle which are in use. If the commencement of the rains is long deferred, the operations of agriculture are retarded, and all its economy disordered: if there is no rain, the land is not broken and seed is not sown: if the fall of rain is not distributed over a sufficient number of days, or if it is not sufficiently gradual and protracted, the crop withers; and if the rains abruptly cease, it fails.

These uncertain crops of the rainy season are Indian corn and millet of various kinds—the lowest type of cereals—and they form the staple food of the agricultural labouring classes. Such grains are not sold in abundance; each small proprietor or tenant sowing only sufficient to support his family through the year, if the crop is fair. If the crop fails wholly or in part, he cannot supplement his store by purchase in the market at harvest time; for he has no means, and his neighbours are stinted like himself. He must then have recourse to the 'bunya,' or village corn dealer and banker, who, on a mortgage of the holding, supplies food and bare necessaries, which he alone of the villagers has means of obtaining from distant markets. On a mortgage of the coming crop he advances seed for sowing, and when he gets a further lien upon the man's little farming implements and his surviving bullock, doles out money for the purchase of a yoke fellow, to replace the beast that died of starvation. Thenceforward the ryot is the bunya's serf; he is eaten up by compound interest at 2 per cent. a month, but it must be admitted he is contented, and regards his state of serfdom as a beneficent arrangement made by Providence to save him trouble.

This is the history of a peasant cultivator in seasons of scarcity; and, as is known from the experience of 1868–69, two seasons of scarcity make a famine. What a famine is in that country will be presently seen.

But suppose the ryot prosperous: the rains begun seasonably, say about the 20th of June; the light ploughing of the ground which is sufficient for his purpose is completed, and Indian corn dibbled in ridges on his field by the 1st of July. By the end of September the stems of Indian corn, which generally grow to a height of about eight feet, are cut and garnered, and the land is at once prepared for spring crops.

The various sorts of millet, largely sown as rain crops, are reaped by the end of October. It is usual to sow with them peas of various kinds, which occupy the land till February or March. Cotton is often sown on unirrigated lands in the rainy season, and a considerable quantity of a somewhat short staple is produced. The problem is to get the crop ripened before the November frosts nip off the seed-pods, a contingency to which backward crops are always liable.

The agricultural year in Northern India is sharply divided into a cold and a hot season; the former produces the ordinary crops of temperate climates, while the latter, with abundant water, matures sugar, indigo, rice, and other tropical products.

About the end of September the rains break up, and profiting by the last fall, the land destined for the spring harvest is ploughed, and sown with wheat, or barley, or 'gram,' an excellent large pulse which is the staple food for horses. In unirrigated districts, the latter is the only certain winter crop. Gram requires less moisture than wheat or barley; its foliage is retentive of dew, and as the plants are sheltered by the clods which are left on the gram fields, moisture is not quickly evaporated by the sun.

Fodder crops for cattle are not cultivated. There is not such a thing as a cultivated meadow in the country. No clover, no lucerne, no saintfoin, no roots, no rye-grass. The generality of indigenous grasses run very rank in the rainy season, and, when dry, possess scarcely any nourishment; but there is an extremely nutritious creeping grass, which grows plentifully wherever it can find moisture. On this grass cattle graze on the roadsides, on the fallows, on the margins of water-courses, and about the wells; and when it fails the luckiest of them have chopped wheat straw and the dry stems of the millet plant, which do not look very nutritious. The milch-cows get as much cotton seed as the cleaning of their owner's cotton may afford, and when given it is in its crude condition as it comes from the cleaning gin. He does not purchase any for their use. The consequence is that the cattle as a rule are poor and weak. At the end of the rains, though

the grass is somewhat deteriorated in nutritious quality, they are, however, in tolerably good condition. But by the spring they are generally thin and miserable, and it is a matter of surprise how the cows produce even the five quarts or six quarts of milk a day, which may be taken as their average yield. When scarcity occurs, the only remedy practised is to drive the cattle from distant parts of the country to feed in the forest lands, at the foot of the Himalya. The sufferings and losses of the cattle from this treatment may well be understood. It is not to be expected that Hindoos, who form the great proportion of the agricultural communities, should do violence to their faith by fattening cattle for food; but a vast loss is incurred annually by the poorness of dairy-cows, and working-bullocks; and it is remarkable that though a Hindoo is greatly offended if any cow or beast is slaughtered, he has no compassion for them during their life, and will see them die of starvation, without compunction, if the loss does not fall upon himself.

The rainfall in Hindostan of the winter or north-east monsoon is everywhere less than in the summer. It is most on the eastern coast from Madras downwards. In Ceylon it is very copious, probably because the north-easterly air currents pass over a wide expanse of sea before reaching the island. On the west coast the only considerable winter rain is between Cananore and Vingorla, a space of about one-third the entire length of the Ghāts.

The rainfall of the north-east monsoon, like that of the south-west monsoon, diminishes in the valley of the Ganges as the distance increases from the sea, and becomes very light in the North-Western Provinces and the Punjāb, where it is due at Christmas. If the winter rain is favorable, the barley and wheat have a fair chance; but on unirrigated lands the spring crops of cereals are at the best very feeble and always uncertain. In the Bundelcund zone, on account of the exceeding dryness, barley and wheat are scarcely ever sown.

The spring harvest is finished near Allahabad by the beginning of April; and at the northern part of the provinces a month later. The land then rests until the rains begin. The atmosphere being charged with hot dust, and the fields brown, and case-hardened, under the burning sun of the second quarter of the year.

The 'Plains,' have an average annual rainfall of 26·6 inches, which would seem enough for agricultural needs. But the greater part of it falls, perhaps, in a fortnight, and there is no rain from September to July, except the Christmas showers. Consequently

the ordinary food crops of the country often fail, and the richer crops, which bring it wealth, are entirely dependent on artificial irrigation, whether from wells or from canals.

In the Sub-Himalayan zone, which has a rainfall of 48·7 inches, rice is successfully produced, without artificial irrigation, in about two years out of three; and sugar is even less certain under the same condition.

In the Bundelcund zone the average rainfall—33·7 inches per annum—is sufficient when it comes in due time for the growth of ordinary monsoon crops; but it is especially fickle, and scarcity is in consequence very common in that country.

It needed not therefore the pressure of recurring famines to stimulate the people of the North-West to raise their agriculture to a higher level. Accordingly the practice of sinking wells for irrigation has prevailed from the earliest periods. The depth at which water is found below the surface in the zone of the 'Plains' varies from 10 ft. to 50 ft. At the lesser depth a little pit can be cheaply dug, which supplies as much water as can be lifted in a day in a jar attached to a light balance-beam worked by men. This process requires at least two men daily to keep a plot of an acre watered, a demand on labour which makes its employment on a large scale impossible.

Pits or wells of this description fall in during the rainy season, and must be renewed annually at the cost of the tenant. Deeper wells are generally lined with brushwood cylinders, and worked by bullock power. They cost from £5 to £18 each, according to depth and soil, and employ 6 men and 3 pairs of bullocks every day to keep 5 acres watered. The cost of the bullocks should not be wholly charged against the well, as they must be maintained for ploughing; but the working is necessarily a considerable expense.

The duration of such wells is as various as the character of the soils in which they are sunk; the shortest period which they last may, however, be taken as about 2 years, and the longest about 10 years. In some favoured tracts deep wells can be constructed without any lining; but this is exceptional to the general rule. A serious objection to the majority of wells is that they contain surface water only, and do not touch the springs; consequently the supply shrinks during the day; and if they are overdrawn, they fall in. As a rule, the springs can only be reached by wells lined with brickwork, costing from £15 to £30 each, a cost almost prohibitory to their employment for irrigation. They pay best—if water be plentiful—when made of

sufficiently large diameter to allow 3 or 4 pairs of bullocks to work at once; in which case they command 20 acres of land, and cost from £80 to £100 each, a price which few occupiers can afford to give.

One or more brick-lined wells to supply water for drinking purposes are always found in every village; but no water can be spared from these wells for irrigation.

The general description of tenure in the North-Western Provinces is, that villages are held in co-parcenary by several proprietors, who pay an annual rent—estimated at half the proceeds from the land—to the Government, which is the landlord. The greater part of the lands are sublet to cottiers, of whom some have rights of occupancy in perpetuity—subject to payment of rent—and some are tenants at will. The former class pay rents which can only be enhanced on fixed and definite rules; the latter make their own arrangements.

It is difficult to conceive a system so fatal to large improvement of individual estates. The head tenants are hampered by their peasants who have right of occupancy, but who have not generally the means to do much themselves. And the Government obviously cannot undertake the improvement of individual farms. A wise measure is adopted by the State in giving advances to permanent occupiers for the construction of wells after the manner of our land improvement companies; but perhaps from a knowledge, on the part of the permanent occupier, that it is the interest of the head tenant to bring him in arrears, in order to obtain full possession of the land, advantage is not very largely taken of this faculty.

In the Sub-Himalayan zone wells have not been used, to any large extent, for irrigation. It has been the practice of the people, instead, to dam the numerous rivers which traverse the country from north to south; and to lead off, from above the dams, channels for the irrigation of the fields. Thus, to this day, considerable areas of rice and a certain area of sugar are cultivated in that region, but at a terrible price, though the money cost is small. The rapid slope of the country limits the effect of a single dam to a very small area, consequently the rivers are covered with dams; the result being a stoppage of outfall which has water-logged the land, and, under the influence of a tropical sun, converted into hot-beds of malaria the rank vegetation growing in these artificial morasses. A Bill is now before the legislative council of India giving powers to the administration to remove the whole of these dams, the Government making proper compensation, either

in water supply from other sources or in money; and it is to be hoped that these beautiful districts may shortly be restored to a healthy condition.

In the third, or Bundelcund zone, no wells can be sunk for purposes of irrigation, because of the depth of the water from the surface, the poverty of the community, and the scanty population; circumstances which necessarily act upon each other. There are some considerable lakes, but their irrigation up to the present time has not exceeded 1,300 acres per annum. Hence that unfortunate country receives no fertilizing influence of water beyond the dews, and the capricious though often sufficient rainfall of the monsoon. In a great part of the tract, where the soil is unsuited to gram and other pulses, even winter crops cannot be grown.

It must not be supposed, from this account of the agricultural conditions of the North-Western Provinces, that the people are generally idle and apathetic. It is true that they are ignorant of the advantage of maintaining their cattle in good condition, and that they exhaust their lands by giving no manure excepting to sugar-cane crops; but many of the agricultural classes of the plains are skilful and laborious in preparing their land to the best advantage, with such means as are within their reach, and according to the knowledge they possess. Nor do they become dissatisfied with irrigation from wells for some time after canal irrigation comes in their way; they are attached to a practice which has endured throughout the East from the days of Nineveh; the really severe work of landing, and emptying the full skin-bags of water at the wells, is combined with a proportion of sitting, talking, and smoking, which suits their habits; and they will readily work on by watches night and day, if drought creates an unusual demand to which their wells can respond. Whilst they freely irrigate finer crops, the farmers will not as yet willingly pay for canal water to strengthen and insure their coarse-grain crops. If the rainfall fails, they hold off as long as possible, and only at the last moment will they try to obtain water to save them. This was the case in 1868–69, when 80,000 more acres of such cultivation were watered than in the preceding year.

Although individually diligent, after their manner, in their own concerns, the natives of Northern India are wanting both in the means, and in the mutual confidence, requisite for combinations of considerable numbers in any works of general advantage; and so it happens, generally, that unless improvements are proposed and carried through by the officers of the Government, they are not done at all. In fact, the people do not want to be improved,

as is frequently found to be the case nearer home. There is no power of initiative in such matters amongst the agricultural community, whose poverty is shown, by the fact that only 15,174 persons out of the agricultural population of the North-Western Provinces,[1] amounting to 17½ millions,[2] or less than one person in a thousand, paid income-tax in the year 1870–71, when all incomes below £50 per annum were assessed.

The people of the Bundelcund zone are an exception to the rule of diligence. Their picturesque country was once clothed with forests, and we know that, in former times, it produced sugar, from the evidence of stone sugar-presses which may be found in almost every village. The rainfall must then have been more abundant, and more constant than it is now, for there are no traces or traditions of old works of irrigation. It is probable that a wholesale destruction of timber effected the change of climate, which has brought the country to its present condition. The people are so impoverished as to be without energy or hope. If they sow a crop, it is said, that after scratching the ground just sufficiently for the purpose, they leave it alone till harvest time, when they go and see if anything has come up. This province, it may well be understood, is a great anxiety to the Government: its inhabitants are quiet and well disposed, but it is difficult to improve them, as a large proportion are subject to little independent chiefs, whose knowledge and enlightenment are not sufficient to enable them to appreciate improvements.

It has been necessary to dwell at some length upon the circumstances which enfold the technical matter under review, because, as the Government of India has embarked on a large expenditure in works of irrigation, which have been freely criticised in England, and even in newspapers in India, published at a distance from the countries concerned, it is proper that the necessity of such works should be proved. If this be not proved by the foregoing description of the conditions of the country, the following account of the liability of the North-Western Provinces to famine, and of the effect of canal irrigation in time of scarcity, may suffice to ensure conviction.

It has already been shown that canal irrigation is very beneficial to the North-Western Provinces, because no other can be relied on, and because the valuable staples of the country cannot be produced

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[1] Report of Administration of the Income Tax in North-Western Provinces, 1870–71.

[2] Report of Census of North-Western Provinces, 1865, p. 86.

without irrigation. ~~The Author~~ we will now adduce evidence to show the extent to which the country suffers from periodical famines where there are no canals, and how the construction of canals would render famine impossible. The evidence is extracted from the official narrative of the drought and famine of 1868–69, prepared for the information of the Secretary of State, in the Revenue Department of the Government—which has no connection with the management and control of irrigation works—and is as follows[1]:—

"Passing by seasons in which mere drought and scarcity have prevailed, the North-Western Provinces of India have been visited by three great famines during the current century, and they have, doubtless, been subject, from time immemorial, to like calamities, of which no complete record remains."

"In 1803, hail-storms, followed by a scanty monsoon, and a failure of the cold weather rains, sufficed to plunge the most opulent districts of the Lower Doab, and of Rohilkund, into bitter distress, and to entail upon the State a loss of revenue estimated at £300,000. Again, in 1837–38, five successive bad years culminated in a famine, which laid waste the greater part of the Doab and Rohilkund, cost the state a million sterling of revenue, and the people not less than 800,000 lives. The last famine occurred in 1860–61. It was the result of an almost entire failure of the monsoon in a country impoverished by the disasters of 1857. Its severity may be gathered from the fact, that nearly 10 millions of people, in the aggregate, received alms from the Government, while $7\frac{1}{2}$ millions were employed on relief works; and the charges and losses incurred by the State amounted to £206,085."

"The outlay of Government on account of the scarcity of 1868–69 amounts to £317,285; and that the loss of life, which will presently be described, was not greatly exceeded, is due, under Providence, to the energy and skill with which the considerable means at their disposal were turned to account by the Government of the North-Western Provinces."

"There are two main reasons for this liability to famine; the first is, that the periodical rains, upon which the greater part of the crops depend, occasionally fail in quantity, or are distributed unequally over the seasons. The second principal reason is, the largeness of the numbers of people who are liable to be thrown out of employ as the pressure of high prices is enhanced."

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[1] Henvey's Narrative of the Drought and Famine in the North-Western Provinces, 1868–70, p. 1.

"The industrial and labouring classes, living by daily wages in the North-Western Provinces, numbered 7½ millions in 1865."[1]

"These classes, in times of plenty, live chiefly upon the coarser grains, which may then be purchased at as little as 80 lbs. for a rupee."

"In times of scarcity (as we have shown above), the coarser grains are not to be procured, and the tendency of famines is to bring the prices of all grain, whether coarse or fine, to a common high level. Nor is this all: when prices rise to famine height, the employers of labour contract their expenditure, and discharge their workpeople. Not only is bread dear, but there is no money to buy grain, which has risen to 16 lbs. for a rupee."

The effects of the famine of 1868–69 in the district of Jhansi, in the Bundelcund zone, are described in the following extracts, from reports of the Commissioner of Jhansi:—

"The grain-dealers, in the hopes of still larger profits, withheld their stores from market. Seeing no prospect of a harvest from which to recover their loans, they stopped advances, whether of cash or grain, to their cultivating constituents, and left them to do the best they could for themselves.[2] The smaller grains were not procurable. From this state of things great distress was beginning to be felt; people began to flock into the city for relief; cultivators with their cattle and families left their homes to wander they knew not whither in search of food or employment. Children are reported to have been sold by their parents in the city of Jhansi. Small-pox raged during the first six months of 1869. Sunstroke[3] carried off numbers of enfeebled wretches; men came in weary and weak and fasting, took a long draught of water and died. Cholera appeared with the rainy season, and fever of a malignant type, the usual attendant of scanty and inferior food, doubled the tale of victims. 20,300 died in the district of Jhansi in 1869, and 3,180 only in 1868."

"In Lullutpore (also in the Bundelcund zone), of 233,000 cattle 95,000, or 41 per cent. died.[4] Some were sent off to the jungles, others were driven to shift for themselves in the barren fields. The change to abundance of grass and water upon the setting-in of the rains in 1869 is said to have destroyed numbers. The stench arising from thousands of carcases polluted the air, and contributed to the outbreak of cholera, which was the last visitation. £8,800 was

[1] Henvey, p. 2 (abridged).
[2] Commissioner of Jhansi. Henvey, p. 63.
[3] Ibid. Henvey, pp. 64–67. [4] Ibid. p. 77.

advanced for useful works, and £7,000 for seed and cattle. But the advances went to buy bread and preserve life; consequently wells have not been sunk; cattle have not been replaced; want of men and cattle prevents cultivation; sixty per cent. of the land revenue demands were suspended."

"In Ajmere (a district since separated from the North-Western Provinces), dependent on tank irrigation, which necessarily failed when there was no rain, the loss of life was estimated at 106,000, or 25 per cent. of the population.[1] The famine was so fearful, and the distress so wide-spread, that the population of whole districts gave themselves up to despair, which was of itself but a symptom of the *disease* of starvation. They would not leave their villages or families to seek sustenance, or left so late that they died on the way."

"Another of the disastrous consequences (says the reporter) in this part of India, is the loss of plough cattle.[2] When grass fails, and the slender stocks of fodder are consumed, the cattle die, or are sold to butchers; and if the cattle perish, cultivation is impossible."

The foregoing extracts relate to the unirrigated regions in the Bundelcund zone. The following describe the condition, at the same period, of the irrigated portion of the 'Plains'[3]:—

"The canals where they existed were the life of the country. Unhappily, however, there were considerable tracts within the area of drought which possessed no such advantages. The history of the famine in those parts has been told. That the benefits conferred by canals, *judiciously* and energetically worked, were enormous, will be apprehended from the following plain statement of facts."

"The area thus irrigated in 1868–69 was 1,442,000 acres against 983,000, the maximum of any preceding year. Of this great area 598,000 acres were cultivated with wheat, and 257,500 with barley: 1,190,000 acres, or 82 per cent., were cultivated with food crops for man and beast. The crops exclusively devoted to human food yielded sustenance for more than 1½ million of adults for a whole year."

The Report concludes, "The produce saved by canals has been computed at half-a-million tons, but the estimate of district officers is still higher, and their valuation amounts to five millions sterling."[4] In former famines there was no food within possible

[1] Commissioner of Jhansi. Henvey, p. 97. [2] Henvey, p. 126.
[3] Ibid., p. 113. [4] Ibid., p. 114.

reach of the afflicted districts. In 1868–69 the development of irrigation created a surplus stock in the plains of the north-west, which an arterial railway carried east and west with great facility. But other means of transport were insufficient to carry the entire food of a population; and unfortunately Jhansi, Lullutpore, and Ajmere, the provinces most remote from railways, were also dependent entirely on rainfall for their sustenance.

The following extracts from the Chief Engineer's Report were adopted and published by Government in the Gazette of India:—

"The irrigated tracts of the Doab (or central portion of the plains included between the rivers Ganges and Jumna) were the heart of the province, from which surplus food flowed out by railways westward to the Cis-Sutlej States, in which there was no harvest to reap; and southward by never-ending trains of carts and camels to Bundelcund, Ajmere, and Rajpootana, where no grain was ever sown. Under Providence, a famine was averted in the Cis-Sutlej States and the Doab by the combined action of railways and canals."

"But besides producing food for the support of human life, canal irrigation created sustenance for cattle which was producible by no other means; and at a crisis when wells failed in well-irrigated districts, and herbage and fodder depended on abundant water, the cattle of the Doab were saved, strong to labour in the work of the following harvests; whilst elsewhere those harvests also were reduced, by the want of cattle which had been swept off by the drought."

"And lastly, canal cultivators became rich, whilst others suffered, because they realised both large crops and high prices; the payment of land revenue was assured, the breaking up of communities, the unsettlement of the social system of the country, the loss and dispersion of property, which famine entails, were averted; and a vast sacrifice of life prevented, which, but for the extension of canal irrigation, must have occurred in 1868-69 as it had occurred in the same districts in 1837-38. I trust these results may be pondered by those who recommend dependence on the irrigation to be derived from wells in a year of serious drought."

Having thus established that canal irrigation in the North-Western Provinces is necessary to good administration, the scheme which has been projected for turning all available waters to the greatest advantage will now be described.

It will be seen from the map (Plate 6) that the greater part

of the largest and most important of the three zones, that of the 'Plains,' is included between the rivers Ganges and Jumna which rising in the heart of the Himalàya mountains, debouch in the same latitude, at a distance of 50 miles apart.

The characteristics of these rivers are identical; both rise in eternal snows, and both receive large affluents before they leave the mountains. The drainage area of the Ganges is 11,200 square miles, and that of the Jumna is 7,800 square miles. In great floods, which are of very rare occurrence, they severally discharge about 230,000 cubic feet per second and 160,000 cubic feet per second. From the middle of October the waters diminish, and by the middle of January, generally sink to about 4,000 cubic feet per second in the Ganges and to about 2,000 cubic feet per second in the Jumna, at about which amount they continue until the end of March, when they are affected by the melting of the snows on the mountains: thenceforward increasing in volume, until supplemented by the south-west monsoon.

The rivers leave the Himalaya on boulder beds, sloping 8 ft. to 10 ft. per mile. After a few miles the boulders terminate, and thenceforward nothing but fine sand is found in the beds. These naturally become troughs in wide valleys, in which the courses of the rivers are constantly varying. The surface of the rivers, beyond the end of the boulder formation, is generally about 40 ft. below the adjacent country.

As it is desirable to commence irrigation as near the foot of the mountains as possible, the head works of the Ganges and of the Jumna Canals have been fixed on the boulder portions of the river beds; partly on account of their stability, partly to obtain for the water entire command of the country, and partly to take advantage of the circumstance that the river bed is there broken by islands into numerous channels of different levels, affording facilities for leading and regulating the supply. All the water in the rivers in January is required, and consequently it is necessary to construct dams across the perennial streams in order to obtain control of the supply. At certain times the whole of the visible water is turned out of the river beds into the canals. Temporary dams of crib-work boulders and shingle, which are skillfully constructed in the violent currents of the rivers, and are swept away annually when the water rises above a certain point, are found to be the cheapest and most suitable for the purpose of holding up and diverting the water; whilst masonry structures are preferred for the regulation of supply channels.

The Ganges Canal, designed and opened by Sir Proby Cautley

—an engineer whose genial love of his work for the sake of its benefit to humanity is traceable in all his schemes—is the largest of the works which have been undertaken in Northern India; and possibly is the largest work of the kind in the world. The width of the bed at the Solāni Aqueduct—18 miles from the head—is 164 ft., and the depth 10 ft. The main channel is 348 miles in length, and is navigable throughout; the several branches, each equal to considerable rivers, are 306 miles in aggregate length, and the main distributaries, constructed and maintained by Government, measure 3,071 miles. Each of these main distributaries is a small canal, with masonry outlets, falls and bridges as requisite. The minor distributaries, leading to individual villages and estates, and the field watercourses, are constructed and maintained by those concerned. A carriage-road is kept up on all main and branch canals, and plantations of timber trees, which will shortly be of great value, border the canals on both banks throughout their length.

The irrigation commences 22 miles below the heads, and is diffused over an area 320 miles long by about 50 miles wide. The canal in the first 18 miles of its course crosses a considerable amount of Sub-Himalayan drainage, some of which is passed through the canal by waste weirs, some over the canal on super-passages, and some under the canal by sub-drains. The works of this section are of an important character, and are chiefly constructed on block-foundations perforated with wells, by means of which they were sunk in running sand, or other unstable soil, until a hard stratum was reached or until they would sink no more.

The Solāni Aqueduct, and its embanked approach, span a valley 2½ miles in width. Its foundations are 20 ft. below the surface: they do not rest on any hard stratum, and the weight of this ponderous structure is entirely supported by the pressure and friction of wet sand. No subsidence has occurred in any part of the aqueduct. The slope of the country in the upper part of its course is much more rapid than that given to the canal bed. The difference has been overcome by masonry 'ogee falls' at convenient points, which also are considerable works. It is found that the ogee fall creates a great disturbance at the tail when carrying a considerable volume of water, and vertical weirs, with long crests, are being built on the new canals. The great need in all falls is to insure a good cushion of water for the water to tumble upon.

The merit of the original works in the upper part of the Ganges Canal is greatly enhanced by the difficulty of the conditions under which they were built. In 1842, when the works

were commenced, there was not a steam-engine at work nearer than Calcutta, 1,100 miles from the head of the canal; and so difficult was transport at that period, that heavy materials from Calcutta were six months on the way, and were liable to risk of loss on the journey; whilst fifteen months elapsed before an indent on England could be realised. No stone was procurable for the works, and great difficulty was found in obtaining fuel sufficient for the large requirement of brickmaking. Brickmakers, carpenters, blacksmiths, bricklayers, and various handicraftsmen had to be educated to supply the large demand.

Below the region of rapid slope the works, although very numerous, are seldom of a special character. No irrigation is allowed directly from main canals or branches; the detailed distribution is made from heads placed in the banks of main distributaries or rājbuhas. A canal officer, besides supervising the construction and maintenance of works, controls the irrigation of his subdivision; it is his business to make the water he receives go as far as possible, and to see that the distribution is just and equitable. He has also some magisterial powers for the prevention of breaches of canal-laws, and it is his business to settle disputes of measurements, and questions whether irrigation has been duly given or not, in which he is much aided by his professional acquirements. His life is consequently a very active one: he travels a great deal, and lives much amongst the people, to whom he is at all times accessible.

Plans of intrusting the distribution to those interested have not as yet met with success. The horary system of Spain and Lombardy cannot be practised in a country where there are no clocks, and where the people are so insufficiently accustomed to the liberty they enjoy under British rule as to submit meekly to the extortions of any one more powerful than themselves, whether neighbours or subordinate officials. All lands irrigated in each harvest are assessed with water-rates fixed for each description of crops, which are collected by the revenue officers and credited to the Canals. This is the only direct payment exacted for irrigation; but as the land revenue consists, as before stated, of half the income of an estate, it follows that when that income is enhanced by irrigation (or other means), the land revenue shares in the benefit. This difference between the land revenue of irrigated and unirrigated lands is termed 'the indirect revenue' of canals. It is credited in the public accounts as Land Revenue, but the Canal Administration shows the amount in its returns.

The earning of a cubic foot of water per second on the Ganges

Canal in 1870–71 was £44 per annum; on the Eastern Jumna, £59 per annum. The difference in value is owing to the latter canal having been longer at work and being more completely developed than the former.

The net income of all the canals in the North-Western Provinces, after payment of working expenses in 1870–71, was £182,437, being 6·64 per cent. on the capital cost of £2,714,631. So that canal irrigation makes an excellent return to the Government in money, at the same time that it increases the wealth of the country, and affords security against misery and famine; but it would hardly remunerate Joint Stock Companies which do not profit by the indirect results.

The Ganges Canal has not been largely used for navigation, in consequence of the rapidity of its current. Measures are now in course of adoption to reduce the slope, and these, it is hoped, will lead to an increase of traffic. In the absence of commercial demand, the water-power, estimated at 30,000 horses, has not been, as yet, turned to much account. A commencement has been made by leasing water-power to persons competent to utilise it, and there is great room for enterprise in this direction.

The Eastern Jumna Canal is the type on which the Ganges Canal was constructed, with such improvements as were suggested by the experience then acquired. It was intended originally that the Ganges Canal should ultimately be largely extended, but the demand for water in the districts to which it is already conveyed has so greatly exceeded anticipation, that there is none available for extensions. The supply at the head, now hardly sufficient to meet demands in dry weather, cannot be increased; nor if it were increased could the capacity of the canal be conveniently enlarged. But whilst the Ganges in dry weather is apparently drained dry at the canal heads, a considerable amount of water filters through the boulder formation. It has therefore been determined to construct a weir across the Ganges, near Rājghāt, where the Oude and Rohilkund Railway crosses the river, and to carry the Lower Ganges Canal and its distributaries on the alignments shown on Plate 6. Feeders are taken into the existing Ganges Canal, about 140 miles above the present termination; whereby the upper sources will be relieved of that extent of duty, and the whole of the large area over which the old and new canals extend will be irrigated annually to the extent of 35 per cent. of its acreage of cultivation, an amount sufficient to secure the country from scarcity.

The Lower Ganges Canal is just now being commenced with a discharging capacity equal to that of the Upper Canal, namely,

6,500 cubic feet per second. Its estimated cost is £1,825,000; the original Ganges Canal will cost, when finished, £3,000,000, and the whole combined system will no doubt be completed for £5,000,000. There is reason to expect an ultimate return of 13 per cent. on the undertaking, but years must elapse before so large a profit can be realised.

The proposed weir across the Ganges at Rājghāt is a somewhat formidable undertaking. The bed of the river is running sand of great depth, which will scour considerably, and no heavy material is available save what is manufactured on the banks. The width of the flood stream is 2,100 ft., and the weir will be made 4,000 ft. in length.

On the right bank of the Jumna below Delhi, lie the districts of Muttra and Agra, which are greatly in need of irrigation by reason of the depth of the water below the surface. The water, moreover, is generally brackish. The soil is a clay loam, which, when irrigated, will be very productive.

The Agra Canal has accordingly been projected for the irrigation of these districts.

A weir has been built, 2,428 ft. long, across the Jumna at Okhla, at a point where a spur of quartz running out from the Aravali range abuts upon the river.

Here a different design has been adopted. Stone being abundant, reliance has been placed upon breadth instead of depth. The work has no foundations. It consists of two parallel masonry walls, 2,428 ft. long, running from end to end of the weir, of which the footings rest on the fine sand of the river bed at low-water surface level. Between these walls, which are 26 ft. apart, stone is packed and a slope of stone constructed, up stream, with a base of 40 ft., and down stream with a base of 200 ft. The height of the crest of the weir above low-water surface is 16 ft. Scouring sluices are constructed on one flank of the weir, to keep a clear channel in front of the canal head.

The weir, when 9 ft. high, was tried last year by the greatest floods ever known on the Jumna. The results were most satisfactory; no serious damage was done, and no settlement was perceptible in the down stream long wall, which had been completed; but injury occurred to the up stream wall, which was left unfinished and insufficiently protected against the cross scour caused by the under-sluices. The depth of water on the crest of the weir was 5·25 ft., the velocity on the crest, 9·33 ft. per second, and at a point 40 ft. lower down the slope it was 18 ft. per second. The bed of the river had scoured 3 ft. on the down-stream side of

the weir, and the 'toe' of the weir had also settled to the same level.

The Agra canal has a maximum discharging capacity of 2,000 cubic feet per second. It is designed to irrigate 350,000 acres, and its navigation will probably be important.

For the benefit of the portion of the zone of the 'Plains' east of the river Ganges, an Eastern Ganges Canal is about to be constructed, taken off at the bottom of the boulder formation. It will water 450,000 acres, equal to 35 per cent. of the area of the districts commanded, and minor canals from the Rāmgunga and Buhalla rivers will complete the requirements of the upper portion of this zone.

In the Sub-Himalayan zone the first requisite is to remove the dams which obstruct the channels of the rivers and water-log the country. At the same time small canals will be made upon each of the water-sheds, and will be supplied from single weirs placed as high as possible up the rivers. By these means the drainage of the country will be effected, and an increased supply of water for irrigation purposes obtained. This scheme will soon be profitable, because the works can be speedily completed.

Great difficulties presented themselves in dealing with the Bundelcund zone; not for want of rivers, for the Keyn, the Betwa, and the Dussan, carry large volumes of water, but at the wrong time. Rising in the high lands of Central India, and dependent solely on rainfall, these rivers leap down to the level of the Jumna in alternate pools and rapids; and as both the country which they drain, and the beds on which they run, are chiefly granite and trap, the rainfall is collected and carried off with marvellous rapidity, leaving the river-beds almost dry soon after the rain has ceased. The channel in which the river Betwa flows is 1,450 ft. wide by 61 ft. deep near the town of Jhansi. The highest floods of the river, which fill it brim-full, generally occur in July or August, and measure above 700,000 cubic feet per second. Yet, by the end of October the supply dwindles to 160 cubic feet per second, and by the month of January it is reduced to 50 cubic feet per second, passing through a notch 6 ft. wide. There is no water at all for sugar and indigo from February to June, and when the river is full, water is not wanted for irrigation.

To irrigate the whole area which the river commands, it would be necessary to store water in the bed of the river, by constructing a series of dams at the lower ends of the pools. But the cost would be prohibitive. It has been therefore determined to exclude

from irrigation the rich black cotton soils which form half the area, and, excepting in extraordinarily dry seasons, produce crops without artificial moisture. The average water available will just suffice to mature the wheat and other winter crops on the rest of the country.

A weir 26 ft. high must be built across the River Betwa, in order to raise the supply and reduce the depth of excavation at the head of the canal to convenient limits. The Betwa Canal will water 120,000 acres in the Jaloun and Humeerpore districts; two-thirds fully, and one-third only at ploughing and seed time. The estimated cost is £170,000, and the anticipated return from water-rate only, 10 per cent.

In the river Dussan the construction of a weir 15 ft. average height, and 45 ft. above the lowest part of the channel, will water the whole winter cultivation which it commands, amounting to 68,000 acres in the Humeerpore district. The cost is estimated at £124,000, and the returns at 11 per cent.

On the river Keyn it is necessary to raise a dam 68 ft. high, in order to bring the supply near the surface. Fortunately, the rapid slope of this river, and the depth of the trough in which it runs, enables this to be done without submerging the country. The canal will cost £130,000, and return 11 per cent.

These three weirs will stand on barriers of granite, crossing the rivers at the selected sites, and will be built of that material.

Lastly, fifteen considerable lakes in Bundelcund, which have been formed in natural reservoirs, will shortly be made available to water 22,000 acres, and to return £2,500 per annum on a capital expenditure of £8,200.

By these means 700,000 acres will be annually watered in Bundelcund and Jhansi; an area sufficient to ensure the province against famine, and, it is hoped, to restore it to its pristine fertility.

Having thus described the means provided for irrigation in the North-Western Provinces, it now remains to explain the financial results. In 1870–71 upwards of 1,000,000 acres were irrigated from existing works, which afforded a net return of £182,500. The capital expended up to the end of that year on all works in operation, good and bad, amounted to £2,747,000; the net profit on the whole was 6·64 per cent. The further undertakings described will add £4,690,000 to the capital, which will then amount to about seven and a half millions sterling. The returns, actual and estimated, are expected to rise to 12 per cent. on the capital, when the canals shall be fully developed; and this development will be more rapid than it has been, because the value of water is

now fully appreciated, whereas in early days the people had to be pressed to take it; also because distributaries are now made at the same time as other works, whereas formerly they were not begun until a canal was otherwise completed; and because experience has taught economy in the distribution of water.

This concludes the narrative of proceedings in the North-Western Provinces. A large system of canals has been projected for the irrigation of the neighbouring province of Oude, from the River Sardah, which will extend to some parts of the Benares division. Those works are under the direction of the Oude Administration.

The physical geography of the Punjâb is much the same as that of the North-Western Provinces. There is a zone of 40 inches rainfall at the foot of the Himalaya, bounded on the south by a belt of 16 inches rainfall. The remaining country to the south is almost rainless. The principal canal in operation is the Western Jumna, an old Mahomedan work, which, like the Eastern Jumna, pays extremely well. Before the annexation of the Punjâb this canal was under the government of the North-Western Provinces, and has been at work under British direction for upwards of fifty years. It has paid nearly two million sterling clear profit, after repaying capital. The Baree Doab Canal, taken from the Ravee, was constructed on the model of the Ganges Canal. Up to the present time it has been contending with the difficulties which beset the first undertaking in a new country, but contending successfully, and gradually making way.

There are inundation canals on the Indus, the Chenab, and the Sutlej, which, as their names imply, depend on the floods for their supply. They are profitable to the state, and beneficial to the people.

The Sirhind Canal, now under construction, is a work of first-class magnitude and importance: it will cost about two millions sterling, and irrigate a country where rain is now very scarce. It is calculated to pay about 9 per cent. Another project is in execution for the irrigation of the Peshawur Valley. Whilst the characteristics of irrigation in the North-Western Provinces, Oude, and the Punjâb, are very much alike, they differ largely from the conditions current in Madras. In Northern India irrigation is carried over the whole country; crops are watered both in winter and summer, and the irrigation affords the greatest benefit in the winter, when there is little or no rain. In Madras, on the other hand, canal irrigation is only effected during the rainy season,

when rivers are full, and is confined to the deltas of the larger rivers.

In Scinde, some few canals are in operation, and others are under construction; but they have not been long enough established to produce any important financial results.

It may be interesting to the profession to know that about 250 engineers, of and above the rank of assistant-engineers, are employed under the Indian Department of Irrigation in protecting the people amongst whom they live from scarcity and famine, and in developing the advancement and prosperity of the country.

A number of interesting matters, engineering, agricultural, and social, relating to the subject, have of necessity remained unnoticed in this rapid sketch, which has been limited to an outline intended to show the soundness of the course adopted by the Government of India, and the magnitude of the interests intrusted to the engineers employed in the execution of the works.

The Paper is illustrated by a series of diagrams, from which Plate 6 has been compiled.

[Colonel GREATHED

Colonel GREATHED stated that the bed of the river Jumna where the weir was constructed at Okhla consisted of nothing but fine sand. There was a considerable stream of water passing down during the rainy season. A different form of weir had been considered more suitable for the head of the Lower Ganges Canal at Rājghāt, where no stone was available. Continuous experience had shown that the best safeguard for a weir was to reduce, as far as possible, the velocity of water passing over it by extending its length, as thereby the dangerous action of the water upon the soft sand of the river bed was mitigated. But scour, and depression of the surface and bed of a river with such a bottom, must occur. It was necessary to defend the main body of a weir by a long talus. The sandy beds of these rivers were always raised on the up-stream side, consequently that portion of the work would be safe from scour. The main defence was presented by a line of contiguous deep wells on the down-stream side of the weir, which were protected by a talus of crib-work of rough boulder stones. The foundation of the Okhla weir across the Jumna was on the level of the top surface of the sand, or actual bed. The slope on the up-stream side of the weir was 4 to 1. The longitudinal walls were of rubble masonry.

Mr. J. F. BATEMAN said everybody present would recognise in the works carried out by the Indian Government the great benefit that had been conferred upon the country at large. The Paper was very interesting, but it was almost impossible to have it discussed by the Institution. There were no engineering details beyond a general description of canals of vast magnitude which irrigated a certain extent of country, and the only subject which could come under the ordinary process of discussion was the construction of the weir at Okhla. He confessed he had not obtained that accurate conception of the mode in which the weir was constructed to enable him to offer any critical observations upon it. He understood that on the up-stream side it had a slope of 1 in 4, and that there were continuous cross walls, with a broad base formed of dry rubble, and then a long slope of dry rubble on the down-stream side. It appeared that there was a head of water of 5 ft. flowing over the crest of the weir at a velocity of 9 ft. per second or 10 ft. per second at one part, and which increased to 18 ft. per second lower down. Such information as this was useful and valuable as a record of practical construction and working. The weir proposed to be erected at Rājghāt appeared to be a cylinder construction of wells sunk into the sand, filled apparently with concrete or other material; but in this case also the Paper had not conveyed to his

mind any impression as to the mode of construction. There could be no question as to the importance of irrigation works, and the great benefit they were likely to confer upon the country; and the Institution could not but feel indebted to the gallant officer for having taken the trouble to put such a series of details on record; but, practically, the Paper was one which did not admit of much discussion.

Mr. VIGNOLES said that the Paper contained a mass of valuable topographical information, but there was not a sufficient amount of engineering details to discuss the most interesting point which had been raised, namely, the best form of construction for a weir where there was a large body of water tumbling over it at a great velocity.

Colonel GREATHED said he feared he had not sufficient materials at hand to enable him speedily to afford more precise details. The great extent of the district over which the works were spread rendered it impracticable to review within the limits of one Paper the general scope of the scheme, and, at the same time, to furnish the details of works of construction. It had appeared to him that the proper course, in the first instance, was to describe the principles on which the scheme was founded, and thus to establish a base for further discussion on specific works and details. The weir proposed to be erected at Rājghāt, at the head of the Lower Ganges Canal, consisted of a vertical wall of brick or rubble masonry, faced with ashlar, constructed to raise the level of water in the river 6 ft. 6 in., and thereby to insure a constant supply to the canal heads which are placed just above it. The river fell over the wall upon a countersunk ashlar platform; a row of continuous wells of moderate depth would be constructed under the vertical wall, and a similar row of deep wells along the tail of the platform. A slope of crib boxes filled with heavy material was proposed for the down-stream protection, and a dry stone slope for the up-stream side of the wall. The flooring of the weir would be of ashlar. At a future time he proposed to present to the Institution accurate drawings of the weirs as constructed, and of the effect upon the Okhla weir of the extraordinary floods of 1871. The down-stream cross wall was then completed to full height, but the up-stream wall was not commenced. At that time, to protect the cross wall, the slopes of dry stone had been carried to about 15 to 1 on the down-stream side, and to about 4 to 1 on the up-stream side. The effect of the flood was to silt up the bed to the level of the up-stream wall, and no damage was done to the boulder talus of 1 in 4; but from the

point at which the velocity increased to 18 ft. per second over the weir. The surface of the down-stream slope was scored by holes, or sometimes by cuts carried down to the tail of the weir, where there was a considerable hole. The safety of the weir, however, was at no time seriously threatened. The holes were not of great depth, and at the end of the season were repaired at small expense.

Mr. BARLOW inquired whether the flat slope of the weir was considered necessary as the result of previous experience in India, or was it made for the first time in the case of the Okhla weir?

Colonel GREATHED replied it was not the first time the slope was carried to that extent. The slopes of the weirs of the Kistnah and Godavery were made much steeper. The stone facings of those works were, if he could trust to recollection, cramped and laid in mortar, whereas, at Okhla, the face blocks were merely packed dry as quarried. The height of those works was also considerably less than that of the weir at Okhla. The annual cost of repairs of the Kistnah and Godavery weirs had at first been great, and consisted chiefly of additions to the tail of the weir. Some stones had been cut away, others had been thrown in, and in that way the slope was prolonged. In the Pennair river, when the weir was carried away for the first time, the down-stream slope' section was increased to a slope of 1 in 10. After the second failure the slope was altered to 1 in 20, and at that point it stood. As the conditions of the Pennair river closely resembled those of the Jumna, the regimen which had succeeded in the first case was adopted for the other. There was a little falling in at the 'toe' of such weirs, where the slope was of small thickness. The great object was to keep the scour off the main body of the works.

Mr. PARKES asked what was the position of the weirs with regard to the courses of the rivers, and, severally, their lengths as compared with the general breadths at their sites?

Colonel GREATHED replied, the weirs had been placed at right angles to the rivers. The length of the Okhla weir was rather in excess of the width of the extreme flood level, and was so designed to reduce the velocity of the water going over, as much as possible. In the case of the proposed weir at Rājghāt, the length of the weir was less than the average width of the river bed, but was in excess of the width of the running water in highest floods, and was so designed that the maximum velocity of the water going over it should be under 8 ft. per second. The object of the weir was to raise the water 6½ ft., and to save that amount of digging for the first twenty miles. The Okhla weir, as constructed, raised the surface of the water 8 ft. 6 in. That would be the level

of the ordinary supply of the canal; the cill of which was fixed 11½ ft. above the original river bed in order to lessen the influx of silt. When the water in the river was above 8 ft. 6 in. it tumbled over the weir, and, practically, it kept at, or above, that level during the low-water season. In dry weather an increased supply would be obtained by raising the crest of the weir 1½ ft. by planks or movable shutters.

In answer to a question he stated that the Agra Canal weir at Okhla was in operation, and the lower Ganges Canal weir at Rājghāt had just been commenced. Much discussion had taken place as to whether it was desirable to give the greatest support to a weir on the up-stream side or on the down-stream side. Experience had shown that, under the circumstances which affected the Rājghāt weir, the strain was caused by the retrogression of the river bed on the down-stream side. But, under other circumstances of soil and slope, a different conclusion might be arrived at. In the case under discussion the river bed consisted of fine sand only. It was found that the bed and surface of water on the down-stream side of the weir had been lowered 3 ft. in consequence of its construction, and the retrogression which this alteration tended to cause required to be carefully checked. At Okhla, a supply of stone on the spot rendered the broad construction preferable. Where material was not abundant safety must be sought in deep foundations capable themselves of resisting retrogressive action.

Mr. BRUNLEES said it would be interesting to have a description of the construction of the portion of the weir at Okhla, over which there was a velocity of 18 ft. per second. He hoped that the Author would favour the Meeting with a sketch of it, as he was sure it would be a matter of interest to all.

Mr. REDMAN said it was to be regretted that the Paper had not been accompanied by general cross-sections of some of the leading arterial canals, showing their formation in cutting and embankment; and, undoubtedly, there was a paucity of that technical information which should have illustrated the subject. But it might reasonably be assumed that the Author only intended the present as the first of a series. When the magnitude of the works and the great number of engineers employed upon them was considered, it almost read like a fairy tale, to find that over so extensive a tract of country, canals, costing, as these had done, large sums of money, yielded so high a rate of interest as 6¾ per cent., and at the same time conferred incalculable indirect benefits upon the country.

The weir which had been erected at Okhla was certainly a gigantic work. It was 2,000 ft. in length—double the length of London Bridge—constructed across a large river. The question at once suggested was, what were the functions of the two vertical walls in the centre of its section? He took it for granted that they performed two important duties, both during the course of construction and also when the dam was finished. In construction they held up the crest of the work, and formed the nucleus of the dam; and when finished, they undoubtedly prevented the spread of one of those breaches which occasionally occurred on the lower slope, as described by the Author; and, so far, they had proved conservative. He did not consider the precise formation of the 'toe' of the slope in a weir of that construction to be of much importance. Undoubtedly, the 'toe' of the slope, in an ordinary embankment for sea defences or reservoirs, with a slope of 4 to 1 or 5 to 1, did perform important functions, and, unless it was very carefully made, the wall was liable to fall, from inattention in that particular. Many engineers sheet-piled the 'toe' of the slope; others dug a trench and filled it in with a mass of concreted matter, forming a 'toe' on which the slope of the wall at a steep incline rested, and prevented the tendency of the wall to slip forward. Again, where exposed to recession of the tide, or in the case of a reservoir with a small amount of water—in either case the wall was liable to be undermined; but in this particular instance those functions were reduced to a minimum; and consequently the slope with an incline like that of 20 to 1 had, in point of fact, very little 'toe' at all.

With reference to the proposed weir at Rājghāt, it appeared that there was a special construction through the heart of the work formed by a series of cylinders. That row of cylinders would perform the same function as the two parallel walls which had been constructed across the river in the case of the Okhla weir. A question had been asked about the upper crest of the proposed weir at Rājghāt. He assumed that it had been planned, to a certain extent, to save the expense of carrying the work to the top of the flood water, and of forming a tumbling over-fall. If his assumption was correct, the series of cylinders would perform a separate duty in controlling any breach that might occur in the surface. Again, when the water was flowing over at the flood level, that duty would be reduced to a minimum.

In conclusion, he would suggest to the Author that he would confer great benefit upon the Students of the Institution if he would follow up this interesting Paper by accompanying it with

more complete engineering details and by general sections of some of the main arterial canals. A series of such documents would add greatly to its value.

Mr. G. B. BRUCE said there was considerable difficulty in discussing the Paper, owing to the incompleteness of the engineering details. As regarded the Okhla weir, there was no information given as to the water levels of the river. It appeared that the bed of the river was of fine sand; and it might be that the low water at certain seasons was just level with the top of the bed, or—as was often the case in Indian rivers—that the low-water level was below the bed. If such was the case, it seemed strange that the cross-walls should not have been sunk below the bed of the river; and under any circumstances, it seemed rather a hazardous experiment to build the centre walls without putting wells under them, or sinking the foundations to a greater depth than had been indicated by the Author.

It had been stated that the slope of the upper section of the apron in the Rājghāt weir was proposed to be only 1 in 4; it was, therefore, a matter of surprise that there was no protection to the 'toe' of that slope, however much such protection might not be required in the lower portion of the apron, carried as it was to such an extent that its formation simply amounted to tumbling in large stones for a great length along the river bed. The entire structure, as proposed by the Author, seemed peculiarly venturesome. The upper row of brick cylinders as well as the lower one ought to have been carried down deeper, on to the clay stratum, to which level, it had been stated, scour occasionally took place during floods. If this was not done, he should expect to see the upper wall fail, resting as it did on shifting sand very liable to scour under the most ordinary circumstances. He did not consider the weir would be safe with the upper cylinders carried down to so shallow a depth; and he thought that it would have been wise and economical to have carried them to the same depth as the lower walls, thus converting them into two cross-walls, and filling the interval with concrete, protected with stone above, and below at the 'toe' of the slope. If built as proposed by the Author, he believed that in a heavy flood the upper walls would be scoured bodily out and carried over the lower line of walls, which, in their turn, would be swept away in the general destruction.

With regard to what had been said about the rate of interest which was returned to the Government by irrigation works in India, he was glad to hear that they were so productive as to lead the Government to carry them out to so large an extent; but still

he took with great hesitation the account of the actual cost of Government works. He thought in India generally that the public did not know exactly the cost of public works: that was, they did not know what was put into the estimate, and what was kept outside of it, or what were the general charges of the military officers and other persons in supervision, whose time and expenses did not form an ingredient in the work. If he recollected aright, there was some Mahomedan work, which was stated to have returned a clear profit of two millions; but it did not appear that any one knew what it originally cost; and, consequently, any estimate of the percentage of profit returned must be a pure assumption. There was a great difference between the manner in which Government accounts were kept and those of a joint-stock company. In the latter case, everything, including all general charges, was placed to the account of the works constructed.

Mr. BALDWIN LATHAM observed, that the Paper was one of considerable interest and importance, as showing the extent to which irrigation works had been developed in India. Apart from the great agricultural results obtained from irrigation, it could not be overlooked that, with the extension of the works, sickness and death had been materially increased, especially in districts in which certain processes of irrigation were carried on. It was well known in India, Egypt, Piedmont, Lombardy, and Southern France, that such irrigation as was brought into operation in the cultivation of rice, developed or augmented a certain class of disease; while, on the other hand, irrigation, by a different method, or in which the irrigated meadows were arranged with sloping surfaces, as in the cultivation of marcite, no baneful results had followed; hence, laws and regulations had been introduced into many countries restricting the cultivation of rice to certain distances from populous places, but permitting other descriptions of irrigation to be carried on in their immediate vicinities. In the year 1845, a Commission was appointed by the Governor-General of India, to inquire into the cause of the unhealthiness of certain irrigated districts. That Commission was also required to report upon the probable effects of the introduction of irrigation, in the district described in the Paper as lying between the rivers Ganges and Jumna. The results of that investigation were recorded in Capt. Baird Smith's "Italian Irrigation,"[1] and the conclusion then arrived at distinctly pointed out that in the districts "under the influence of the existing canals, sickness had been

[1] *Vide* "Italian Irrigation," by R. Baird Smith, F.G.S., Captain of Engineers Bengal Presidency. Edinburgh and London, 1855. Vol. ii., p. 359 *et seq.*

largely developed." The Commissioners, however, pointed out that this was in a great measure due, not so much to the results of irrigation, as to the fact that the natural drainage of the country was impeded, and tracts of swampy land created which diffused a malarious influence around.

In the cultivation of rice, the system adopted was that of surrounding the irrigated plot by a small embankment, turning the water within the enclosure; and, as a rule, such water had no chance of escape except by evaporation through the rice-plant or from the water surface. Irrigation works laid out with surface slopes, and a current of water flowing over the surface, prevented that stagnation which, in the case of rice, had been shown to be detrimental to health. What were the precise differences of the application of water in rice irrigation and those in irrigation works, where a constant current was kept moving, he had made a subject for investigation, and would proceed to give the results of some experiments, which would show that where a surface velocity was created, that velocity would promote a circulation of water through the soil, a matter of no small importance, as by that circulation manurial matters were equally distributed, while other matters, not required by the plant, were removed, which, if allowed to stagnate, produced those ill-effects shown when cultivating rice. He had been led to undertake those experiments in consequence of having observed in sewage-irrigated fields, that if sewage was placed on a field laid out with surface slopes, and the field was perfectly saturated with water, as in time of heavy rainfall, the sewage displaced the rainfall which had saturated the soil, taking its place; and that subsequently it appeared that each increment of sewage passed on the surface of the field displaced the previous increment, and so a circulation of water was carried on through the soil. In order to put these views to the test he had constructed a water-tight glass tank, 5 ft. long, 12 in. deep, and 6 in. wide. The tank had then placed in it a solution of perchloride of iron of the specific gravity 1·027. It was then slowly filled with fine silver sand, and after being allowed to rest for some time in order to obtain perfect solidification of the materials, the tank was placed at an inclination of 1 in 100. An infusion of nut-galls of the specific gravity of 1·002 was allowed to pass slowly on to the tank, at its upper end, the infusion being dropped into a small metallic trough, laid across the glass tank so as to prevent the disturbance of the surface of the sand by the passing of the infusion of galls on to it.

In Fig. 1 the point T showed the position of the trough receiving the infusion of gall. The two liquors used were adopted on account of their mixture forming a tannate of iron, or ink, which portrayed a perfect diagram at every stage of the experiment. The light lines showed the effect produced by the infusion of galls after each 24 hours' experiment, and the total quantity of solution passed from the commencement of the experiment. It would be seen that by natural gravity the infusion of galls could not be passed to a greater depth than 0·6 in., at the upper end of the tank, and that gradually the depth diminished to nothing at the lower end. After 48 pints of infusion were passed on to the tank the infusion reached the bottom of the tank, and from the direction of the curved lines it was natural to infer that, had the tank been deeper, a greater depth would have been reached. What was singular in the case was that the light gall solution which displaced the iron solution for the space above the lines, marking the point of contact between the two liquors, was found to contain an infusion of galls; and, until the black lines marking the junction between the two liquors reached the lower end of the tank, nothing but a pure uncoloured solution of iron came off, equal in quantity to the gall solution passed on. At the end of the ninth day, instead of an infusion of galls, a solution of perchloride of iron was passed on to the tank. The three dark lines showed the effect produced in those days by reversing the order of the liquors which had been used, and again producing discoloration at the point of junction between the two liquors. This was corroborative of the displacement of the former liquor occupying the interstitial place in the sand. It would be seen that the

Fig. 1. Circulation of Water in the Soil.

displacement was much more rapid when a solution of greater specific gravity was used to displace an infusion of less specific gravity. During the three days the iron solution was passed in, it had the effect of driving forward the former infusion of galls in the sand; for, as the three dark lines were being produced, the three light lines marked + + + were also formed. The last two light lines were formed by simply passing water on to the upper end of the tank, which had the effect of pushing forward the infusion of galls. A number of experiments were also made, with different materials, all of which went to show that where there was an inclination of surface or the productions of natural currents over the surface, a circulation through the soil took place.

While these experiments were proceeding another tank was prepared giving the conditions of a rice-irrigated field. In this the sand was saturated with a solution of perchloride of iron, and an infusion of gall passed on to the surface; the tank was kept level, and there was no inclination of the surface and no motion in the liquor over the surface; and it was found that after six months' contact, discoloration of the sand had not taken place to a greater depth than 0·25 in., showing that there had been no displacement of the water occupying the interstitial space in the sand. What could be the precise cause of these results, except circulation, it was difficult to conceive. It might therefore be assumed that when there was no motion in the liquor over the surface there was no penetration into the soil; but that by an inclination of surface producing a current, however small, that current appeared to have the power of putting in circulation the water occupying the interstitial space of the soil. The curved lines in Fig. 1 represented the different rates of velocity within the interstices of the sand, at various depths from the surface. For example, at the end of the third day it would be seen that, while the water had flowed 4 ft. through the surface of the sand, it had only flowed a distance of 1 ft. at the level of the bottom of the tank; showing that the velocity of the surface was 4 times that at the bottom of the tank. From these experiments he had drawn the conclusion, that rice irrigation differed from ordinary irrigation, where the fields were laid out with slopes so as to create a velocity of the surface, as much as a stagnant swamp can differ from a running stream; and he thought that they further demonstrated that, if it was possible, by any means, to establish such a system of irrigation in the cultivation of rice, whereby a circulation of water could be promoted

through the soil, that class of irrigation could be deprived of its noxious influence. The circulation of water through the soil, although never to his knowledge previously established, had a marked beneficial influence on irrigation works, as conclusively shown from the practice adopted for generations in the irrigated districts of Piedmont and Lombardy, where it was customary, as the head-water was left, to increase the natural slope of the irrigated beds, in order to create a greater velocity, and hence a greater circulation through the soil. He might also add, that even rain falling upon the surface of a field having a considerable slope would produce a circulation through the soil; for it was found that an infusion of gall, admitted on to the glass tank, at several points formed a series of curves very similar to cycloidal curves, and that the iron solution was driven out at the lower end of the tank.

Mr. W. SHELFORD said that he had in his possession a longitudinal section of the river Nene at Sutton Bridge, taken in July, 1847. At that time the present bridge had not been erected, but an older structure occupied its site, and the bed and sides of the river—of sand and silt—having been scoured away, it had become necessary to protect the foundations of the bridge by throwing in stones. At the time the section was taken the stones so thrown in had formed a weir, of a rough character, across the river to the height of some 7 ft. 6 in. above the normal bottom. The river Nene was a tidal river, and at high water of spring tides there was a depth of about 21 ft. over the weir, and at low water of spring tides a depth of about 3 ft. 6 in. The difference of level between the surface of the water on the upper and lower sides of the bridge was about 1 ft. at low water. At a distance of 300 ft. on each side of the weir there was a deep hole, which was 23 ft. below the normal bed, giving on each side a slope of about 1 in 10 from the summit of the weir. At a distance of 600 ft. on each side of the weir the new bed remained undisturbed. The total distance between the two extreme points where disturbance took place being about 1,200 ft.

Mr. J. G. C. C. GODSMAN considered that the necessity for irrigation works was unhappily too well known to all acquainted with India, each and every one of whom must have often heard the terse but truthful phrase, "Irrigation is life-blood." If the self-constituted rulers of that country did not take care that a sufficient quantity of water was stored up and supplied to the natives, they were responsible for the lives lost by famine. As the question stood at present, it was the duty of engineers to consider how they could most efficiently and economically design and con-

struct works which should—by contributing to their future happiness and prosperity—in some measure, recoup the toiling millions for the fearful amount of taxation which, under British rule, had been exacted from them without adequate return.

The Paper was certainly not one from which much could be learnt by the Students of the Institution who were preparing for Indian appointments. It appeared for the most part to be composed of geographical, meteorological, and statistical extracts, of comparatively little use to those whose duties for many years would necessarily be confined to executing and superintending subordinate works. It was true that some scanty details had been given of the weir in course of construction at Okhla, and of another proposed at Rājghāt. But so far as could be ascertained from the imperfect information before the meeting, both of those models were rather to be avoided than imitated.

About thirty years ago he was employed under the East India Company upon the irrigation works of the Madras Presidency. At that period, with the exception of the Colleroon Annicuts and the works in connection with them, no extensive irrigation works had been undertaken by the Company; and indeed those which had been previously constructed under the native rulers had, in numerous instances, by an unwise economy, been allowed to fall out of repair, and hence into desuetude and decay. It was a melancholy fact that as lands previously watered had been reconverted into jungle whole districts had become deserted and depopulated. The comprehensive accuracy of design exhibited in the more extensive native works, and the thorough economical adaptation of the minor constructions to the several objects in view, showed that the natives must have formerly possessed a thorough practical acquaintance with the leading principles of fresh-water hydronomy. Their clear appreciation of the relative importance of the primary elements of time, height, and volume was strikingly displayed in the accurate manner in which they had determined the exact character and class of works necessary to meet the peculiar exigencies severally involved. Scarcely any changes were required in the levels of the larger channels which they had designed, and their works, although constructed of the most economical materials, had lasted for centuries. A well-known instance of the durability of the native works was afforded in the case of the Grand Annicut, or weir, at the seaward extremity of the island of Seringham. That weir was 1,800 ft. in length, from 40 ft. to 60 ft. in breadth, and its crest was from 15 ft. to 18 ft. above the level of the adjacent bed of the river. Although

only built of rough stones of moderate size set in clay, it had withstood the effects of the floods for 1,600 years, a period at the expiration of which few engineers of the present time could reasonably hope their works would exist.

When he was employed in the Madras Presidency there were several systems adopted for dealing with the scour produced by the overfall water from a weir. Some weirs were simply built of rough stones, and others had masonry or brick dams with short masonry aprons, the entire structure being based on foundation wells. In those cases rough stones were from time to time tumbled below the crest of the weir or at the termination of the apron, until experience showed that a sufficient number had been thrown in to counteract the effect of the scour. Another mode was to construct a masonry apron of a greater length, in which upright stones were sometimes placed to 'break' the fall. In some weirs the apron was divided into a series of steps with the same object in view, while in others hollows, or a series of hollows, were constructed in brick or masonry, so that the reservoirs formed should act as a kind of water cushion, and these were occasionally filled with rough stone so as further to break up or distribute the force of the fall.

At that time there was a great divergency of opinion as to the precise forms to be given to weirs. The natives contended that to deal economically and successfully with water, it was only necessary to study the operations of the Great Engineer of the universe, and hence, that the forms adopted for artificial works should as nearly as possible be those by which the desired effects were naturally produced by the action of water. Hence, nearly all their weirs were designed in curves, or a series of curves, in greater or less imitation of the forms assumed when water crossed a natural shoal or hard in the bed of a channel. On the other hand, the Madras Engineer officers for the most part rejected this theory, and adopted straight, level, and perpendicular outlines in their constructions. One of the advantages possessed by the native system was, that the curved surface of the crest of the weir allowed the water to pass over more easily; while the central depression, or depressions, insured a greater degree of uniformity and permanence in the deep-water channels into which the broad beds of sandy rivers with small falls were apt to be divided. Another advantage possessed was, that owing to the greater velocity at the depressed portions of the weir, the sand and silt brought down from the up-country were passed over the weir instead of being allowed to accumulate in the bed of the river

on the up-stream side. The practice of the Madras Engineer officers was to construct under-sluices in the body of their weirs in the hope of attaining a like result, but he might safely say that during his experience in the Madras Presidency he had never seen an under-sluice in a weir that had effected the object with which it had been erected, namely, that of keeping the bed of the river above the weir free from accumulations of sand and silt. The under-sluices in the Colleroon Annicuts were a notable illustration of the general correctness of the native views. The under-sluices in both of these works had proved a complete failure, and in the case of the Upper Annicut it had become necessary to revert to the native practice by lowering a portion of the body of the work so as to make a central depression of 700 ft. in width and 2 ft. in depth. He made these special criticisms with less reluctance than he otherwise should have done, because—in their financial and general results—the Colleroon Annicuts had unquestionably proved one of the most remarkable successes on record. None but those who, like himself, had been employed in the district could form an idea of the blessings which they had conferred, or rightly estimate the gratitude and esteem in which the memory of their talented projector, Sir Arthur Cotton, was held by the inhabitants. To the moral energy and persistency of that officer it was mainly due that sanction was obtained for the first large expenditure, under British rule, for irrigation works in India. In these days of facilities of transit and rapid communication of ideas, it was difficult to realise the extent to which the Madras Engineer officers, at that period, had to rely upon their own resources, or the disadvantages consequent upon the comparative isolation from professional intercourse and assistance in which they were placed, and under which they had to discharge their onerous duties.

Colonel MEDLEY, R.E., had seen the Okhla weir while under construction, and certainly had thought it a very bold piece of engineering; but he understood it to be an attempt to apply the Madras system of construction to a stream in Upper India. He understood that system to be a shallow foundation with a long talus of loose stone on the down-stream side, which was repaired and replaced by fresh stone as fast as it was undermined and disturbed by the scour of the river. In Bengal, on the other hand, the foundations were carried to a great depth, often to 60 ft. or 70 ft., until firm soil was reached. The difference in practice he had understood to arise from the presence of stone in the one case and its absence in the other. Bengal Engineers, as a rule, had nothing but brick to work with; but, as there was plenty of stone at Okhla, the Madras practice had been followed.

At Rājghāt, he believed, there was no stone. The mode of construction proposed for the weir at that place seemed hazardous. He should certainly fear a dangerous scouring action at the 'toe' of the down-stream slope.

He had been for four years in charge of the Indus Inundation Canals, of which a slight description might be interesting to the Meeting. They were for the irrigation of what was called the 'khadir,' or bottom-lands of the river, and were simply cuts from the parent stream, generally parallel to its course. They were filled with water when the river was in flood, and emptied again in the cold season, when the river was low. Advantage was then taken of the subsidence of the water to clear out the silt deposits of the channel, in readiness for the next rise. They were thus only useful to the 'khurreef,' or autumn crop, the less valuable of the two; but, owing to the very scanty rainfall of that part of the country, seldom exceeding 4 inches or 5 inches annually, they were of great importance to the cultivators.

As to the perennial canals, which were the more immediate subject of discussion, it had always seemed to him that sufficient attention had not been paid to a better mode of selling the water to the cultivator than the present system of measuring the irrigated land, and charging water-rate by crop and area. He had always thought that the water should be sold, like beer or wine, by measurement, and that any interference with it after it had been delivered at the distributory head was an expensive and meddlesome system, which drew away the engineer from his proper duties, to business which more properly belonged to the revenue authorities. He was quite aware that there were difficulties in the invention or application of a satisfactory module, arising chiefly from the inequality of supply in the main canal, and therefore of the head of pressure at the irrigation outlet, as well as from the want of available fall at this latter point. But he believed those difficulties had been exaggerated, and that any system which gave even a tolerable approximation to fairness would be preferable to the present. In this opinion he was supported by Colonel Fife, the Chief Engineer of Bombay Irrigation, and by other engineers, though he was aware the canal engineers of the North-Western Provinces were generally opposed to it as impracticable.

It also appeared to him that more attention should have been paid to the importance of navigation canals in Upper India, a subject which had only lately received serious attention. He was aware of the great, perhaps the insuperable, difficulty of rendering irrigation canals properly navigable under the conditions that

obtained in Northern India; but the importance of cheap water-carriage in a poor country like India, and for bulky articles such as grain, could scarcely be overrated. He did not see the great benefit to be derived from indefinitely increasing the productive agricultural area of a country, unless equal facilities were given for the cheap carriage of the produce. In many countries which are exceedingly productive, the condition of the cultivator was anything but satisfactory. Low wages and low prices, in fact, had always meant poverty all over the world, and always would mean it. He did not undervalue irrigation in saying that it was not the panacea its friends often represented it to be.

He remembered the late Lord Elgin remarking, when he saw the Ganges Canal, that having been in America, he could not help feeling what a pity it was that all the water-power at the various falls should be running to waste. Colonel Medley would like to see the time when English capital, which was expended all over the world, should be applied in that direction, so that great manufactories might be established along that magnificent stream. Meanwhile it was desirable that cheap water communication should be obtained as quickly as possible, so that the whole population of fertile districts should not be employed simply in raising their daily food. With cheap water communication, the failure of the crops would not be the irretrievable misfortune it now was.

Mr. BRUCE inquired whether the cross walls of the Okhla weir were founded upon the normal bed of the river, or were sunk below it?

Colonel MEDLEY replied, they were founded upon the normal bed of the river, not sunk.

Mr. BRUCE remarked that the ordinary practice in the Madras Presidency would have been to have sunk the wells 6 ft. or 10 ft. below the normal bed of the river, and then to have built the walls upon them.

Colonel SMITH said that it was quite true that, as Mr. Bruce mentioned, the Madras practice would have been to sink wells filled with rubble, and to build the walls upon them; but he thought the use of the walls in the Okhla weir was not properly understood. Objection had been made also to there being no foundation to the 'toe' of the dam, both in front and rear. He would point out, with regard to the front of the wall, that a foundation was not found to be necessary, for, instead of the soil being carried away, there was an accumulation, and the whole river-bed gradually filled up, till it reached the crest of the weir. There was, therefore, no occasion for protection to the front wall,

or slope. With regard to the rear slope, which was a very long one, it was found that the stones at the end did sink during floods, and as often as they sunk their places were filled up again and again, so that, in the end, a good foundation was secured.

Then, as to the use of the walls. It was found that the great force of the stream in floods often lifted even large stones, and carried them bodily down the slope, so that, if there were nothing to prevent it, the whole of the upper part of the weir would be carried away; consequently, it was found necessary to construct cross walls, to prevent the stones traveling. They were not intended to resist the scour, which was prevented by the front wall and slope.

With respect to the interest upon the capital expended upon the works, Colonel Smith could not vouch for the accuracy of all the statements which might have been put forth, but he remembered on one occasion being permitted to see the accounts of the Ganges Canal, which was unsuccessful for many years, and he was struck with the faithfulness with which every farthing was debited against it. He was happy to learn that the works in the North-Western Provinces paid 6 per cent. upon the capital; but he did not know whether, in making these calculations, the salaries of all the engineers were charged against them or not. He was inclined to believe they were.

With regard to rice irrigation, he himself was a witness that it was not necessarily unhealthy. His son, now present, was born in the midst of it; for at that time Colonel Smith's family occupied a house in the centre of a large area of rice fields, and the same house had been inhabited for years without the least thought of unhealthiness. He believed, if the rice were properly drained, there would be no inconvenience from malaria; certainly neither he nor his family ever suffered from it. If, however, the drainage were neglected, or only half done, the result might be different.

With regard to under-sluices, Mr. Godsman had remarked that "he had never seen an under-sluice in a weir that had effected the object with which it had been erected, namely, that of keeping the bed of the river above the weir free from accumulations of sand and silt." Colonel Smith must, with great deference, say he never now heard of under-sluices which did not answer their purpose. But that was not to keep clear the bed of the river, but the mouth of a supply channel. It was useless to attempt to clear the bed of the river, but it was absolutely necessary to keep the mouth of the irrigation channel clear, and that was done by the under-sluices.

A remark was made about the works of the Grand Annicut having

been in existence 1,600 years; and what a lesson it afforded, compared with the works of modern engineers. It was true that the Grand Annicut continues to this day, but the authors of it never considered the question of pounds, shillings, and pence, and it is all the more creditable to modern engineers whose works endured, in which that very important consideration had been attended to. When Sir Arthur Cotton, who was the founder of the modern system of irrigation in Southern India, first went there, it was to repair the defects in the Grand Annicut; and, in doing that, he originated the system which was the glory of Southern India, and a benefit to the whole empire.

Then, something was said about time and height. He believed one of Sir Arthur Cotton's suggestions led to a considerable change in the previous system. In the early days of irrigation, the native plan was to make a channel at such a height in the bank of the river that, when the river rose to that height, the channel was filled, and, when the river went down, the tanks were left full; but it must be observed that sometimes the river never rose to that height, and then the tanks were not filled. That was the defect of the native system. By Sir Arthur Cotton's plan the dam raised the bed of the river, and adjusted the level of the flood to that of the channels, so that they were always filled. That was the difference between the ancient and modern systems, and he thought the latter had the best of it.

With reference to the measurement of water—the Government of India had expressed a desire to have the means of measuring water on a large scale by an apparatus which would be simple and easy of management. He was glad to say there was already a simple method of doing it. An instrument made for another purpose had been accidentally found to possess the property of delivering equal quantities of water in equal times, under any head, and thereby of measuring the quantity of water passing through it. The instrument was very simple, cheap, inaccessible, and, when properly fixed, not liable to get out of order.

Mr. Godsman said, that whatever differences of opinion there might be as regarded the efficacy of the under-sluices, it was desirable that those studying Indian irrigation should clearly understand that they were originally placed in the Colleroon Annicuts with the object of keeping the bed of the river above them free from accumulations of sand and silt. As the contrary might have been inferred from Colonel J. T. Smith's remarks, he would take the liberty of reading some extracts from the Transactions of the Madras Engineers, of which that officer was the editor. In a

Report on the Colleroon Annicuts, Colonel Duncan Sim, the Inspector-General of Irrigation Works, said:—"There remains another objection to be considered which I have not heard stated, but which appears to me to be of more weight than any of the preceding. It is the difficulty to be apprehended in preventing the bed of the Colleroon above the annicut from being raised to a level with the top of the work, or nearly so, by the sand and mud in its passage down the river. If this should happen, it is manifest that the bed of the Colleroon being raised at the point of separation several feet higher than that of the Cauvery, a much larger portion of the mud and sand will be carried into the latter river than can be discharged by the under-sluices or into the sea through the mouth of the river. The object of the annicut is to raise the water, preserving the bed of the river at its present level; for if the bed is raised, the remedy, like all former expedients, will be temporary.[1] . . . . To prevent this evil, a certain number of under-sluices have been constructed in the annicuts, but these are apparently not of sufficient power, for the bed of the Colleroon at both annicuts has already been very considerably raised."[2] And, again, in a subsequent portion of the Report, reverting to the subject, he said:—"In considering in a preceding part of this Paper the objections which have been urged against the annicuts, I have adverted to the difficulty of the gradual deposition above it of the mud and sand brought down by the river in its gushes, and the ruinous consequence which would follow any considerable rise in the bed of the point of separation from its sister stream. The evil was not overlooked by Captain Cotton, who provided for its prevention seven sluices, as already described, distributed along the annicut, having in all twenty-two vents, each about 2 feet in width and 2½ feet in height. But these are evidently inadequate to the purpose, and are far from being sufficiently powerful to regulate the bed of a river 750 yards wide, having a rapid stream 12 or 14 feet deep in high floods. On such a volume of water, bringing down a large quantity of earthy matter from the mountains, twenty-two small openings can scarcely be expected to exercise sufficient influence. The nature of the deposits also increase greatly the difficulty of their removal. They do not consist entirely of sand or gravel, but contain a considerable portion of fine clay and soil, which, as it dries, hardens and forms, with the sand, a mass almost impervious to water, and requiring the influ-

[1] *Vide* Transactions of the Madras Engineers, vol. i., p. 142.
[2] Ibid., p. 143.

ence of an extensive and rapid stream to displace it. The accumulations above both are already very considerable, and in some parts not far below the top of the works."[1]

In his Report on the Irrigation of Southern India, Colonel Baird Smith had also stated that there were twenty openings or sluices in the Upper Annicut, and that the object with which they were constructed was "to effect the passage of the sand, and, if possible, to prevent the bed of the Colleroon above the dam being raised by deposits."[2] And he further stated that they had proved ineffectual, and that, at the time of his visit, the bed of the river above the dam was on the same general level as the crown of the work.[3]

As regarded the question of navigation, it might be interesting to know, that in the Madras Presidency it was the custom to bring the produce from the upper country down the rivers, irrigation channels and canals in wicker boats covered with hides—the down-stream favouring their voyage—and that, when discharged of their load, they were taken to pieces, and carried back by bullocks. He did not consider rice cultivation was necessarily unhealthy if proper precautions were taken as regarded the drainage; but in all tropical and semi-tropical countries he had found that when the water first entered the dry channels, and moistened and stirred up the decayed vegetable matter, a certain amount of endemic disease was inevitable.

Colonel SMITH said, that he had expressed a different opinion from Mr. Godsman on one point, which he still maintained. He said that under-sluices in an annicut were not now made to maintain the bed of the river, but only to keep clear the mouth of a supply channel. Colonel Baird Smith himself stated that the under-sluices in the annicut referred to were useless to keep clear the bed of the river.

With regard to the Colleroon, he said it occupied the same position in regard to the Cauvery as a main river does to a supply channel, and the object of the under-sluices in the bank of the Cauvery was to discharge any surplus water from that river into the Colleroon, which was at a lower level; but it was found that there was no means of regulating the bed of the Cauvery except by the construction of a demi-annicut, or wall, across its mouth at the point of separation. What he stated was that the object of under-sluices was, not to keep the bed of the river clear, but only to keep clear the mouth of the side channel, which was the channel for leading off the water for irrigation.

[1] *Vide* Transactions of the Madras Engineers, vol. i., p. 144.
[2] *Vide* "Irrigation in Southern India," p. 18.
[3] Ibid., p. 20.

Mr. Russel Aitken expressed his concurrence with the views of Colonel Medley as to the desirability of selling water for irrigation by actual measurement of the water supplied, but thought there were many difficulties in the way of doing it, as the Hindoo cultivators were very cunning in seeking means for evading payment. He was the only engineer in India who had sold water for irrigation by meter, and it was impossible to conceive the innumerable methods that were practised to evade payment for all the water consumed. Therefore any means invented for measuring water must be exceedingly simple, and at the same time incapable of being tampered with.

The proposed mode of constructing the weir at Rājghāt was quite different from what was originally proposed by Captain Jeffreys; and looking at the construction generally, and the mode in which it was proposed to put in the tail slope, he did not think it practicable to make a permanent work in the manner described. As the level of the water in the river was much higher than the country on one side of it, the danger of causing the river to take a fresh course must not be overlooked.

Mr. Hawksley, President, regretted that the Author was unable to attend to reply upon the discussion. The Paper was really a valuable one. If time had permitted he would, on behalf of the Author, have made a few observations upon some of the principal points which had been discussed; but the hour for adjournment had arrived, and therefore he had not the opportunity of doing the Author that justice which otherwise he should have felt himself obliged to do on the occasion of his enforced absence.

January 21, 1873.

T. HAWKSLEY, President,
in the Chair.

The discussion upon the Paper, No. 1,350, "On the Practice and Results of Irrigation in Northern India," by Colonel W. H. Greathed, was continued throughout the evening, to the exclusion of any other subject.

THE LAND AND THE LAW IN INDIA.

pht.

AN ELEMENTARY INQUIRY,

AND

SOME PRACTICAL SUGGESTIONS.

BY

RAYMOND WEST.

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PREFACE.

The remarks contained in the following pages were originally intended to form part of an official paper. The writer having been invited by Sir W. Merewether to state his views on the subject to which they relate, desired that he might be put into possession of such materials as had already been collected by the Government of India. In the mean time he set down such observations as occurred to him, but before the opportunity arrived for putting these to their proposed use, his official position had been changed. The invitation given in virtue of the place he formerly filled could no longer operate as a reason or an excuse for presenting his views to the Government; but as his investigation rested in some respects on grounds not usually taken, he thought that he might render a service to the discussion of some questions of momentous importance, by laying them before the public.

Such being his motive the author can desire nothing more than that his opinions should be thorougly sifted, and if erroneous, refuted. The only credit he claims, is that of an honest endeavour to form a sound public opinion on the points of which he has treated, and an earnest hope that, whether agreeably to his own views or not, it may be formed aright.

THE LAND AND THE LAW IN INDIA.

1. Thinking on the right exercise of the State's authority in India in giving or refusing to give effect to private obligations has brought different classes of thinkers to widely different conclusions. Some have arrived at a conviction that contracts ought not to be enforced at all, the regulation of men's mutual dealings being left to caution, conscience, and a sense of common benefit. Others have contended for a rigid enforcement of all promises as a necessary discipline and a means of giving to intelligence its proper weight in the social scale. Whether the State should interfere at all; on what principles; with what limitations; what property, if any, should be unavailable to creditors; what should be inalienable; what means of protection, temporary, or permanent, the State should create or allow to be created; are all questions to which clear answers, appropriate to the people and their circumstances, should be obtained by a Government anxious to deal beneficially and consistently with the problems connected with the occupancy of the soil in this country. On the working of our laws as they stand, the Government of India has abundant information before it, but the teaching of the results actually realized, may perhaps become clearer and more effectual if the facts are

traced, as consequences to causes lying somewhat beyond the scope of what is usually called a practical inquiry. The social condition, the character and the ideas of the people, being derived in a great measure from primitive beliefs and traditions, once shared with them by kindred nations, some useful light may perhaps be drawn from a comparison of the institutions of each, as moulded by circumstances at times much alike for all, though at others strangely divergent. Anology may thus do much, both in the way of explanation and of practical suggestion, that will have its use for the statesman who would adapt the past results of time to the needs of an essentially ancient society. And even if this ond should not be gained, no harm can arise from a rather more abstract and discursive investigation than usual of a subject which in many special aspects has already been sufficiently sifted. To such inquiries the present one may possibly serve as an introduction.

2. The early history of society affords many indications that the binding force of bargains depended at first, not on any public sense of moral obligation, or of the national advantages of traffic and credit. Mutual interest prompted to transactions, and their efficacy, except in cases of immediate exchange, was secured by ceremonies which invoked the recognized deities as witnesses, and devoted to their wrath the contractor who failed to carry out his undertaking. It was probably as the guardian of the honour of tribal or national gods that the State first interfered to compel the perfor-

mance of engagements, the institution thus resting, like that of individual property, on an ultimate basis of religious dread; but the repression of crimes of violence would naturally claim the first attention of an organized society, and from the investigation of such crimes, however rudely conducted, would gradually arise a habit of weighing the counter-claims of adversaries, one of whom strove to take by force what the other had promised, but withheld by fraud.

3. The sympathy with a person defrauded, which springs naturally from men's selfishness, must soon have been strengthened by a perception of the general advantages to the community arising from the possibility of depending upon a prompt and strict fulfilment of promises. The man endowed with a special gift for some useful pursuit, could thus devote himself to that alone, instead of wasting his powers on employments in which he could not excel. He could supply his neighbours with knives or pottery better than they could supply themselves, but would do so only if he could rely on obtaining the stipulated price in money or in kind. The division of labour when once its benefits become manifest, assumes an almost sacred importance amongst primitive communities, and its maintenance obviously depends on the enforcement of contracts.

4. In times of dearth and calamity, the community must either see itself weakened by the loss of many of its members, or it must itself support them, or it must enable them, as far as possible, to obtain subsistence on

credit. The last is the course which recommends itself wherever it is practicable. The wealthier members of the community lend of their abundance to the poorer, and to induce them to do this, the State enforces the sometimes very hard terms on which they insist. The harshness of these terms in a half civilized community is no doubt excessive, but it is preferable to starvation; and when the further progress of the society makes this harshness repulsive to its moral sense, the poor obtain little or no credit when they most want it. The State then has to afford by the machinery of a poor law, or in some other way, the relief which its subjects at an earlier stage would have had to purchase by their own labour in temporary or permanent slavery.

5. In the intercommunication and mutual dependence which immediately grow up in an organized community, the capacity of individuals to perform the duties required from them by the State, must often depend on their obtaining the performance of obligations due by others to them. Such obligations, therefore, the State is interested in enforcing. It is interested too, in a society of the Asiatic type, in encouraging loans of grain, in order that a produce may be realized, of which it will itself receive a share. At a further stage of progress, it finds its advantage in cultivating a general regard for the sacredness of engagements as a means of obtaining faithful service for itself,*

* "Nec enim ulla res vehementius rempublicam continet quam fides, quæ esse nulla potest nisi sit necessaria solutio rerum creditarum." (Cic. De Off. II. 24.)

and of furnishing a stimulus to the influx and accumulation of capital by which it indirectly profits.

6. When so many motives concur it is not to be wondered at that every Government has been impelled in one way or another to lend its compulsive powers towards the enforcement of contracts. Theoretical writers in recent times have in some instances doubted the expediency of the State's interference in such a matter, and it appears that for a time the late General Jacob declined to allow suits for debt in the District of the Upper Sind Frontier; but there can be no doubt that the absence of a remedy against knavery is opposed to all economical principles, discourages accumulation, prevents money going to the quarters where it would be most useful, causes accommodation to cost an extravagant price, and leads to great waste of time in the contest of cunning and evasion. Evasion lapses readily into fraud; and fraud undermines all manliness of character, as plausible falsehood supersedes courage and simplicity. If a Government does not wish to foster the elements of crime and national baseness as well as poverty, it will compel the payment of debts, and the performance of contracts, by all means that do not bring about still greater mischiefs than those which it is sought to cure.

7. Such mischiefs, as history informs us, have actually arisen in many countries. They are especially apt to arise when a community is passing from a very low state of organization, to one of comparative complication and refinement. The agents and instru-

ments of accumulating wealth acquire in such a state of things a continually increasing value. The pitiless rules and rude fictions which worked tolerably well in a medium of diffused stolidity and indifference to suffering, and where there was no great temptation to abuse them, are employed more unreservedly and more intolerably as cupidity and sensitiveness both attain a fuller development. In an expanding society, with abundant means of production spread out before it, every one can earn something beyond his own subsistence. He cannot in most communities readily quit the neighbourhood where he was brought up. The tremendous compulsion that may according to primitive laws be brought to bear upon him in case of necessity, leads the small capitalist to accommodate even a pauper with money and goods to an extent which would otherwise be ruinous to himself. The laws make it generally ruinous to the debtor. The creditor practically has the person of his debtor as a pledge for the debt, and enjoying this advantage is legally relieved from all that care and circumspection which morality, if not self-interest, ought to make him exercise. The phase of morality however is of late growth, which teaches men to abstain voluntarily from pushing to the utmost every advantage that they enjoy over those who are at once weak, ignorant, and so far as they can be, dishonest. Until classes cease to be marked off by sharply defined boundaries, extortion is not checked by any controlling sense of ethical rights inherent in every fellow being. Sympathy is almost confined to the members of one's own

class; a high standard of action towards others is hardly dreamed of. Thus a rigorous law of debtor and creditor, absolutely necessary as it may be for the foundation of an orderly community, is very soon perverted into a means whereby cunning, without any aid from a higher faculty, sucks out the vitals of improvident strength and productive capacity. First it tempts into its snare, and then converts the fruits of its victim's life to its own sole benefit.

8. The victim is not in general a guileless one. By force or fraud he would escape the payment of his debts if he could. His sense of duty to his creditor is not more developed than the creditor's generosity towards him, though his fear of him may be great and efficacious. There is no great choice in point of moral loveliness between the two. But the creditor, endowed with an hereditary astuteness well cultivated by his experience of the world, is far more than a match for his half savage debtor. The latter brought fully under the yoke, can but writhe, and shuffle, and escape as much toil as his master allows him. This he does. As it is uncertain how far he will himself be benefited by his labours, he works as little as he can. He wastes much time in sheer evasions; when at work he feels no wholesome interest in it. If stripped of his land or his implements he cannot work, his maintenance has in some form to be provided by the other members of the community. The sight of many men in this condition produces amongst their fellows an intense hatred of their creditors. It becomes

a thing to glory in, almost a point of honour, to cheat and injure the odious class as far as may be. The law which gives the creditors tyrannical power, the the rulers who execute it, share the feelings they inspire, and the end is a widespread and corroding political demoralization.

9. If on the one hand, therefore, the State must needs lend its aid to the creditor as an essential condition of material progress, it must on the other hand assign bounds and conditions to this aid, without which it will probably become an instrument of social and political mischief. Where special circumstances have arisen to disturb in a marked degree the assumed equality of borrowers and lenders, of debtors and creditors, the relief of tenants, and of persons liable on mercantile instruments in France during the Prussian invasion furnishes a recent and striking instance of the Government declining in the public interest to enforce contracts essential in ordinary times to the general well-being. Particular classes in England, supposed to be specially subject to imposition or unfair usage—as seamen and miners—are protected against disadvantageous bargains. The truth is recognized and acted on that there is no real equality, even of the roughest kind, between them and their employers. Still less can such an equality be assumed with safety in a community split up into sections, divided by the impassible barriers of caste and hereditary occupations. The extremes of astuteness and gullibility are thus fostered and brought into contact. The Brahman or

Banya money-lender has no more sense of moral responsibility to check the full exercise of his legal rights against a Mussulman or a Hindu of a different caste, than the patrician creditor at Rome towards his plebeian debtor. The law does not allow the seizure of the debtor and his sale into slavery, or the division of his carcase amongst his creditors. If it did; a nexum as rigorous as the Roman would be entered into. That it does not; that the State refuses to enforce extreme penalties for failure to perform promises, implies that when and how it shall exercise compulsion, is a question of degree and of policy, determinable in each case by considerations of the general welfare. These make it expedient to facilitate and support transactions, but not at an extreme cost; and apart from these the State is under no moral obligation to enforce promises for the benefit of the class of capitalists. Against the claims of this class it must set its own prior and superior claim to the maintenance of its poorer subjects in a condition to be useful citizens; and their usefulness may often depend on their enjoyment of liberty and property, while it is not materially affected by some weakness under temptations to extravagance. Capital must be fostered; but there are other essential elements of national prosperity and safety, which must be fostered too.

10. Amongst the first if not the very first of these in an agricultural country is a sound and beneficial relation of the mass of the people to the land. In England, as we know, this was slowly won, political influences having al-

most invariably worked towards the satisfaction of social necessities in a graduated moulding of the land law down even to our own day. The pressure on the land, however, the craving for its possession, has been so tempered by the continual expansion of commerce and manufactures, that the inherent stability of the institutions connected with real property has never been subjected to a testing strain. In Ireland laws substantially the same have had to be subjected to a change quite inconsistent with their recognized theory, by giving to the farmer a partial proprietary interest in the soil that he tills. Behind this theory itself, however, lies the paramount principle that landed property is in its very nature specially the subject of a plastic power in the State. Moveable capital has the properties of a liquid; any unequal pressure causes its almost immediate transfer to another place; but the land and things attached to it cannot be moved, and in proportion as the State's control over them is inevitable, it must in the long run be extensive. "Quant au droit de propriété loin qu'il soit absolu, il n'y en a jamais eu un plus variable plus subordonné. Il a été dans l'antiquité, dans le monde moderne, ce que la société a permis qu'il fût." It is the power of the State—in itself very variable—which forms the ultimate definition of its right; but the State itself being pervaded by the current doctrines and prejudices of the community, is practically restrained in many directions, not only by its desire and perception of what will add to the material welfare of the people, but by sympathy with their most peculiar, which are also in

general their most cherished notions, their reverence for antiquity, their respect for possession, their sense of the sacredness of certain social arrangements, and of particular men and things. If the Government be a foreign one it will be less subject to this last set of influences; but while it keeps in advance of the people in order to justify its own existence, it must not be a stranger to their way of confronting the facts of life and society if it is to gain a genuine attachment, or to win its subjects to submission to its own dominant ideas. There must be action and reaction, the Government working towards definite ends yet recognizing the advantage, as Montesquieu suggests, of not seeking these by too abrupt a course, and stooping to make use of all the materials of tradition and prejudice that nature and history have furnished to its hand.

11. There is no subject about which these cluster more tenaciously than that of the occupancy of the land. "Why it is that lapse of time creates a sentiment of respect for possession" is a question which Sir H. S. Maine regards as "deserving the profoundest examination." He seems to approach its solution when he afterwards says that it may be put as "an inquiry into the reasons which led one composite group (of kinsmen) to keep aloof from the domain of another." It is from the primitive religion, the mystery deepening into dread, and from dread into worship, which surrounds the dead ancestor that the power of the head of the family amongst the ancients is to be deduced. He had as a child learned the sacred formulas, had tended the

sacred fire, had been initiated into the sacred rites by which the dead, raised by superstition to the rank of "dii manes," might be propitiated. This coarse deification of the successive representative members of the family blended the whole series into a single continuous existence. The "shráddha," which Manu bids the paterfamilias celebrate with offerings of rice and milk and fruits, is a memorial of a still more ancient time when the father, who alone could bring down blessings on the family, and who would himself by and bye be a domestic god, was all in all to his dependants. The Lares thus called into existence partook of the character of those who conceived them. They were jealous of their rights; attached deep importance to forms; were narrow and exclusive in their beneficence. To those beyond the pale of the family they were regarded in general as inexorably hostile. Such a system tended obviously to a segregation of each family group from its neighbours. The family altar had to be carefully secluded from all strange eyes. The house and its enclosure were sacred against intrusion. The savage penalty of impalement denounced by Manu against housebreaking rests on the consideration, or the condition, that "a sacred fire is kept up." The food which had in part been consecrated to the Manes became impure if even looked on by one who did not worship them. And since this belief, as many indications show, was, in one or another variety, spread throughout the Indo-European race, each man who lived in awe of his own family gods and firm reliance on

their power looked with equal or almost equal dread towards those of his neighbours as potent for good or ill within their own sphere. He would not lightly trespass within the precincts of his neighbour's abode, or of his family tomb, where also an altar was commonly placed for the worship of the "Manes sepulti."

12. This protective capacity of the family gods having once gained recognition, it was natural that it should be extended. It seems probable that an enclosure round the tomb was the first landed property that was recognized beyond the sacred walls of the dwelling; but at a very early period particular spaces of ground, quite apart from tomb or dwelling, were, it is clear, consecrated to the use of a single family by ceremonies placing them under the special protection of its gods. The writings of classical antiquity are full of references to this notion, which in modified forms subsisted until heathenism was overthrown. The belt of land severing two neighbouring properties, over which no rights could be acquired, the violation of which was regarded as a sacrilege, is to be found equally in the Hindu as in the Roman institutes, and preserved by long tradition is now turned to purely practical uses in the rules of the Bombay Revenue Survey. The rustic god Sylvanus, who in Horace's Ode is credited with power to guard the crops against thieves and stray animals, is the antitype of many a rude image planted in a Deccan field, and assiduously worshipped as its protector. Sacrifices were till lately, and in some places still are offered by the Maratha cultivators to the gods supposed to preside

over the different sections of the village lands. The sacred procession of villagers decked with the sacrificial fillet, which Manu and Yajñavâlkya prescribe as the means of settling a boundary, the highest amercement imposed on him who transgressed a boundary, point to exactly the same order of ideas prevailing amongst the primitive Hindus as amongst their Western brethren. The Buddhist prince in the Mahawánso marks out the confines of a temple with the plough much as Romulus traced the sacred pomoerium. The field once dedicated to one set of family deities was theirs, in the view of the family and of the neighbours, for ever. Wicked men might disregard the general respect for this appropriation; but as the Jewish law laid a curse on him who disturbed his neighbour's landmark, so the old Roman statute outlawed the man who had but touched a terminus.

13. The origin of property regarded as secluded against trespass is thus traced, with such clearness as the subject admits of, to the religious notions which appear to have possessed the minds of nearly the whole Indo-European race—to have almost exclusively possessed them—in the early dawn of primitive civilization. It was natural that, being thus regarded, the family lands should also be deemed inalienable. An Aryan freeman would have answered the sacrilegious proposal of a grasping superior with the same vehemence as Naboth: "The Lord forbid it me that I should give the inheritance of my fathers unto thee." The sale of land was positively forbidden in Sparta and

many other ancient States; and the utmost amelioration allowed at Athens under the laws of Solon was that a man might part with his land if he would also renounce his citizenship. It is by the light of these indications that we should read that antique rule quoted in the Mitâkshara which says that "in regard to the immoveable estate sale is not allowed." This law, as we know, was afterwards changed; but the primitive notion has not even yet lost all its influence. The law of equal partition so broke in upon the original sole succession of the eldest, as solely capable of performing the family rites, that the idea of complete inalienability could not be maintained; yet in the cumbrous ceremonies through which a transfer was to be effected we find a trace of the earlier state of things. The Roman mancipatio, a religious ceremony, was an analogous way out of the same difficulty. In Greece there could be no sale without a sacrifice.

14. We have come in these later days of the Christian dispensation to regard certain personal capacities of the individual man, notwithstanding their appreciable money value, and the possibility of placing them wholly at the service of another, as essentially *extra commercium* and inalienable. A man may not sell himself or his family into slavery. He may not, as in China, submit himself to a vicarious punishment for a money payment. The worth of the humblest citizen in the eye of our faith, and thence of our law, is too great to be thus made a subject of mere barter. Such a conception, natural as it now appears to us, would have seemed

chimerical to the ancients. This may make us the more ready to believe that our conception of property as severable at will, or by order of a judge, from the person of a debtor, was to them full of difficulty. A voluntary alienation of land or house was allowed but by degrees. Confiscation was a punishment reserved at first for those who for their crimes were driven into banishment, as amongst the Hindus for an outlawed Brahman. The execution of decrees against a debtor's realty was a thing not dreamed of. His property was deemed inseparable from his person and essential to his citizenship. Even the Roman laws of the twelve tables, though they placed the person of the debtor completely at his creditor's mercy when once the requisite formalities had been gone through, yet preserved his proprietorship of his land. Means were found to evade this saving principle; and when personal slavery for debt had been abolished, the device of severing the possession from the proprietorship placed all the beneficial interest in the land at the disposal of the creditor; but the mere necessity of resorting to these roundabout methods shows the strength of the antique feeling. The *Lar familiaris* still looked with disfavour upon any rupture of the tie that bound to his service a property once dedicated, the national gods with jealousy upon every disturbance of the status of a citizen.

15. Such a disturbance was indeed attended with social and political mischiefs, which must under the Empire have often driven pious minds back upon the superstitions of an earlier period. When the small

freeholders had all but disappeared, the truth became evident that "*Latifundia perdidere Italiam.*" The sturdy yeomen who had once replenished the Roman armies had been replaced by a spiritless host of slaves disqualified legally and morally for military service. The duties properly attaching to the occupation of the land had become impossible of performance under the uncontrolled working of an economic revolution, and there was no one who durst carry out Machiavel's principle that a State must be revivified by a periodical recurrence to the principles on which its institutions were first founded. The interest of the State in its domains has become almost equally obsolete in modern Europe, though once made the foundation of its political system. It is only amongst the Jews perhaps that one finds, beside a power of temporary alienation, a definite and inevitable law providing, by the institution of the jubilee year, for the return at stated periods of every small estate, no matter how disposed of or encumbered, to the same family to which it had been attached in the original distribution of the promised land.

16. The order of ideas which excluded the possibility of executing a decree against the landed property of the debtor, though modified by the lapse of time, has never quite lost its hold upon the popular mind of India. None of the Native law-books contemplate such a mode of redress as available to the creditor. Jagannátha, in Colebrooke's Digest, after laying down the general rule that "sufficient effects should be attached to provide

for the payment of what is due from a person who has absconded," continues: "But there is a distinction in respect to land;" and after an elaborate discussion of the nature of landed property he arrives at the conclusion that "if the owner be present, the sale should be made (only) with his assent," just as in the "bonorum emtio" of the Roman law a true transfer of the "dominium" was held impossible without the consent of the owner. The creditor might practise upon the superstitious fears of his debtor by sitting in dhurna at his door; might (somewhat after the Roman fashion) drag him before the public assembly, and then put him into confinement and make him work. But violence seems to have been regarded as inappropriate except in the case of clearly dishonest debtors. To all others the Hindu Law is singularly lenient. A respectable man is to be released on his promise, confirmed by an oath, that he will pay when he can; and for *this* purpose even a Súdra may be respectable. If a debtor is prevented by any calamity from paying punctually, he is to be constrained to pay only by small instalments as his means enable him. The proceeding to be adopted in the case of a very indigent debtor is one that contrasts strangely with British ideas. A further sum is to be taken from the creditor and advanced to the debtor, who from the gains he is thus enabled to make must pay both the old debt and the new. These provisions, resting on texts traced back to a remote antiquity, were not mere moral precepts, but a part of the living law of the Hindus at the time of the establishment of British

ascendancy. Even confinement in jail for non-payment, as Mr. Steele remarks, was unknown under the Maratha Government, or even under that of Tippu. Of "attachment in execution" of a debtor's land there is no trace. The feeling of a permanent connection between a family and its estate, on which were founded the extraordinary privileges, as they seem to us, of the Mirásidar, still operated to prevent any enforced alienation of land, though the religious views in which that feeling originated had in the course of ages become dimmed or altogether forgotten. An extraordinary degree of efficacy seems to have been attached to dunning, in its various forms. The faith that is reposed in it is even now remarkably great, and it is practised to an extent and with a vigour that are hardly suspected until one grows somewhat familiar with Native life. It is in reliance on this, more even than on the action of the Courts, that such a vast quantity of money in India is continually lent out on personal security which in any other country would be absolutely worthless. The debtor subjected to this process does not, as would a European, grow exasperated and contumacious. He accepts it as part of his fate, and by little and little usually pays up both principal and interest.

17. It would be almost inevitable that under a code of such extreme mildness as that of the Hindus a good deal of improvidence in contracting debts should spring up. But it was in fact the same want of energy in the national character which produced carelessness in

borrowing, which also kept the least rigorous of the old laws in vogue, and made strangely weak methods of recovery practically sufficient. Such a stamp of character, fostered in its weakness by centuries of indulgence, could not be shaken off in a generation at the bidding of a new set of rulers. To impose on such people the rule of punctual payment on the appointed day, with the alternative of law proceedings, costs, and eviction from house and land, was to condemn the mass of them to ruin. Traditional habits and needs, the voice of the small society which was their world, still impelled them to borrow. The money-lender grew accommodating in the enjoyment of new means of enforcing payment. His expectation in many cases was the odious one that the contract would not be fulfilled. The tremendous penalty of eviction was but half realized, or not realized at all, by the ignorant landholders. Vague and confused in all their notions of time, a few years forward seemed to them indefinitely distant; they indulged in the groundless hopes with which sanguine weakness excuses its improvidence. The ground of mutual benefit on which the respect for contracts rests could not subsist between classes thus related. "*Ità primo concursatio et preces: dein strepere prætoris tribunal; eaque quæ remedio quæsita, venditio et emptio, in contrarium mutari.*" The pregnant words of Tacitus are for some parts of the country a literal description of the embarrassed landholders of India. They are in many districts getting every day more deeply involved, and are rapidly losing

their paternal acres without losing their attachment to them, without having acquired other means of gaining a subsistence, without the notion drawn from the far fountains of their faith, of the iniquity involved in severing a man from his household gods, having been replaced in them or their neighbours by the latest teachings of political philosophy. It would have been well if the principles of self-reliance and unqualified responsibility could have been instilled by some process less fatal. It is like throwing them into deep water to make them learn to swim. History teaches that in all nations growing up in a course of spontaneous development, a change of institutions follows regularly on a change in the dominant ideas of the people. In this way the new blends itself imperceptibly with the old, and the law is a mirror of the varying aims and needs that it has had to satisfy. Thus healthily evolved, it re-acts healthily on the tendencies from which it has sprung, and affords at each stage a fresh starting-point for some new advance of the ethical or political standard. Without saying that such a course as this is possible in India under the British rule, one may yet say that the circumstances which make it difficult or impossible ought to be profoundly studied, that the results should greatly control our application to this country of abstract theories or empirical laws gathered in a wholly different field; and that as our institutions are the outgrowth of our special character, we should, before introducing any one of them that must largely affect the condition of the people, draw the popular mind in some measure within our own

sphere of thought on that particular subject. No polity can be enduring which does not find room within it for the national virtues and defects; and while we are striving to improve the moral and intellectual tone of the Hindus by the infusion of new and wholesome ideas, we ought in some things to wait patiently for their fruition. If our superciliousness prevents our doing this, we may often plume ourselves on some mechanical success when we have in truth been sowing the seeds of political disaster and of a dissolution of society.

18. The rise of the great and eventually absorbing interest of the State in the active life and the property of the citizens in an ancient community was closely connected with the growth and development of the religious theory. First the family expanded to a clan, as unattached adventurers sought admission to the patronage and to the sacra of some house whose success made manifest the power of its guardian deities. The clan by an analogous process became a tribe, and the tribe a city or a nation. The nascent state was always placed under the protection of some deity specially propitious to the founder. A colony took with it a portion of the sacred fire from the national altar, and a branch of the founder's family to minister thereto. Before Salamis or Veii could be conquered, their local gods had first to be won over by prayers and promises. When they could not thus be persuaded to change sides, or constrained by the utterance of some coercive formula, they had to be subdued by the superior might

of the victors' gods. They fled from the land they could not protect: its sacred things became profane, its dedication was undone. The way was thus opened for a fresh dedication, new auspices, new rites; but it was the community only, which had triumphed with the aid of the national divinities, that could appropriate the conquest or extend its own frontier. Hence as the State increased its area the bulk of the land came to be held by the burgesses as a grant from the city, a grant however in which none could participate who were not full citizens through partaking in the national sacra. For the stranger there were no legal rights, no capacity for property. The citizen himself had to support the national institutions not only by his personal service but by contributions from the produce of his lands. A Roman proprietor could be fined for negligence in the cultivation of his own fields, as under the Hindu system he might have to make good tenfold the loss occasioned by a similar carelessness. The numerous Agrarian laws were repeated assertions of the State's paramount title to the land. When this was parted with, as to the allotment made to the poorer citizens under the Sempronian law, incumbrances forthwith began to gather round these small properties. For the relief of the owners they were made alienable, and then passed rapidly again into the hands of the wealthier class.

19. When so many resemblances on other points are found to have existed between the primitive

institutions of the Hindoos and those of their brother members of the Aryan race, it is at least highly probable that the notion of the State's paramount title to the soil was developed in much the same way amongst them as amongst the Greeks and Romans. The power of the Kings, well established as we must suppose before the great masses of the Brahmanic people could be put into concerted movement, underwent amongst them an entirely different series of changes from those to which it was subjected in Europe. In the beginning there is some evidence that their Princes, like the βασιλεῖς ἱεροὶ of the West, held their political power as an incident or attribute of their position as the religious chiefs of the communities. "The early Rajas," Mr. Wheeler says, "were their own priests," and then he adds "that the Heroic age of Hindu history was eminently an age of sacrifice." Exactly what we find in Homer and Virgil, and indeed in Livy too. The development of the caste system deposed the kings from this position. The priestly class, who were appointed their purohits or pontiffs, became in time the sole depositaries of the sacred formulæ, and alone able to conduct the most important ceremonies with the punctiliousness of detail, failing which the anger of the gods would be aroused by the very sacrifices intended to draw down their blessings. But the ambition of the Brahmans does not seem to have extended to the usurpation of the active political functions of royalty. The traces of the king's priestly character have nearly been blotted out from the existing records under the

manipulation of the sole learned caste, but his political power is exalted in extravagant terms. The idea of shaking it off seems never to have been awakened amongst the Indian peoples, as in the small and close-packed communities of Greece and Rome. The peculiar course of development taken by the religious theory was all against such a revolution. Hence the idea came down to modern days that the land is a "protective property successively held by powerful conquerors, and not by subjects cultivating the soil." The Hindu lawyers have not thought it inconsistent with this that "the cultivator has a subordinate usufructuary property, not a royal property." The title of the subject arising from mere occupancy, independently of the sovereign's sanction, on which modern lawyers have expended so much discussion, is summarily dismissed by Jagannátha, whose work Mr. Colebrooke translated; but the king having assented to a subordinate property "such property is created as is described by the terms of his assent." Thus "though the subject's property in the soil is weaker than the king's..... .....it is founded on the reason of the law and on settled usage." This is a rational and consistent system. It preserves to the sovereign generally an interest in the land, not to be defeated, as Manu and Yajnavalkya say, by any prescription, but not to be extended, even by a conqueror, so as to deprive the land-owner who is really such, of his subordinate property.

20. According to this theory the king must remain superior owner everywhere except where he has dis-

tinctly granted away his rights. He cannot with propriety even part with these rights to any considerable extent, for "without (his) property in the soil" as Jagannátha says, "there can be no certain rule for the protection of the subjects." Even where a true proprietorship has been granted, the protective title of the king is not annihilated, and his title extends to a share of the produce in the case of such holdings as those on the Mirási tenure. This necessarily involves power to dispose of the land in the event of the Mirasdar's absence or incapacity so as to prevent loss to the revenue. The appropriation of pasture lands by a village community Yajñavâlkya makes dependent on the monarch's will. Though alienation is allowed, the assent of the king is essential to its validity (Colebrooke's Dig. B. II. C. IV. Sec. II. T. 33, and Mitakshara Ch. I. Sec. I. paragraph 31). The word "Sámanta," translated "neighbours," should, Mr. Ellis thought, have been rendered king or lord, and in this sense Jagannátha has taken it. Jagganátha commenting on the text—"All subjects are dependent; the king alone is free," says—"therefore it is proper that they should make gifts or sales with his assent." Property again "consists not in the right of aliening at pleasure." Hence though "the cultivator is not destitute of ownership," as some would infer, his ownership is a qualified one, and being subordinate to that of the king cannot be transferred without his consent. Practice on this point has been conformable to the principles laid down by the native lawyers. Mr. Ellis shows that in Malabar, "where

the proprietary right of the subject is probably better defined than in any part of India," the established form of transfer before the introduction of the British rule contained the formula "in the presence of the rulers of the land," or something equivalent, as an essential part of the conveyance.

21. The power of the State over the disposal of land being so extensive and indefeasible, no question could fairly be raised, according to Hindu Law or precedent, as to its right for the good of the community to step in and prevent any alienation which should seem injurious. This is the most appropriate exercise of the "protective property of powerful conquerors," one which native feeling approves and looks for, provided it be not turned to selfish and oppressive uses. The same feeling drawn, as we have seen, from the head springs of their faith, and working itself into the formal expositions of the law, has always been opposed to the severance of a family from the family estate, has hardly conceived an involuntary severance as possible, has never sanctioned the enforcement of mere money claims by execution against the real estate of the debtors. Our English Government, taking for universal principles a set of prejudices directly the reverse of these, has built up its system on the rule of "Laissez faire," assumed a complete practical equality amongst its subjects in bargain making, thought little of the corporate character of the family, nothing of the tie between it and its lands. Yet in many of its measures it might well

have borne in mind, that as the principles it was applying were but of recent discovery or demonstration, there was at least a possibility that in the older time they had never been hit upon, simply because of the existence of conditions which prevented the possibility of a beneficial practice in accordance with them suggesting a sound and fruitful theory. The past of institutions which we condemn has often had this merit at least, that it was the necessary germ of what we commend in the present. It was a stage that must needs be gone through, and which probably another country, such as India, must still go through, to reproduce the circumstances under which the most advanced views are also the most statesmanlike. The older ruder views might practically be the sounder, because to treat India as England of the day was equivalent to treating England as Utopia. That there were many excuses for the course taken must be admitted. The Indian Government is still continually censured for not being quite abreast of England in any of the thousand departments that may at the moment be subjected to criticism. But English experience, if it be really sounded, teaches the advantage wherever it is possible, of carefully examining what has already been done, and building upon an existing foundation.

22. Suppose that either of these principles had been followed out in dealing with the question of interest on debts, it is probable that many serious evils would have been avoided. The usury laws of England were no doubt founded on a mistaken pre-

judice and an economical heresy; yet in settling a maximum legal rate of interest, they set up a standard, and gave fixity to men's vague ideas of what might reasonably be asked for the use of money in those numerous cases in which the loan partook but slightly of the character of a true mercantile transaction. In the commercial development of recent times such cases are becoming rarer in proportion to those wherein the loan is taken in perfect independence, and without any sense of obligation on either side; but at an earler stage borrowing at interest in England, as elsewhere, was generally an appeal of helplessness to avarice. It was well in such circumstances that the spirit of unlimited exaction should be kept somewhat in check by the dread of legal penalties, as well as of popular censure, and that the Courts, so far as they could, should give relief by undoing all that had been ingeniously done to defeat the law. There are few who will deny that the India we have now to deal with is much more like that earlier England than the England of today. The typical borrower in India is in no position, financially or intellectually, to contract a loan on terms regulated by the calculations of an actuary or a banker. The typical lender reproduces young Ralph Nickleby with his simple rule of "twopence for every halfpenny." The rule of "Laissez faire" applied to such parties operates simply as a license to extortion. It is liberty to the fly to entangle itself in the spider's web.

23. But the same lesson was even more effectively to be gathered, had instruction been wanted, from the

Native practice. The Hindu Law nowhere manifests that repugnance to the taking of interest which we or at least our grandfathers inherited from Rome and the old Testament; but the rule of "dámdúpat," applying to nearly all loans of money, imposed a limit which at least sometimes kept extortion within tolerable bounds. The practice that grew up at least in the Dekkan is stated in Steele's Laws and Customs: "Punchayats award a sum according to the debtor's circumstances, either taking off the interest of a particular period, or reducing it to 1 or 2 per cent., or striking off the excess of double the amount of principal, and decree that it shall be recovered by instalments. In case of poverty the principal only or a part of it is accepted by the creditor." The payment of what was awarded, was enforced as we have seen by measures of great leniency.* In the days when India was governed by Regulations it was thought a proper course to limit the interest recoverable in a Court to 12 per cent., and few or no complaints were ever made that this rule unfairly hampered a mercantile nation in the inter-dependent arrangements of a system of credit. The passing of Act XXVIII. of 1855 was a mere adoption of an English doctrine supposed to have been proved correct by impregnable reasoning. In the circumstances assumed as data this was so; for India perhaps the

* Grote, (Appendix to the 11th Chapter of his History of Greece) supported by Savigny, shows that a great distinction was made by the Roman Law after the abolition of the "Nexi Obligatio" by the Lex Poetelia. The Old Law continued in all its stringency for enforcing payment of the principal, while it was rescinded as to the interest.

maintenance of the limitation, or a still closer approximation to the native practice by giving to the Courts an extended discretion to deal with interest, would have been a more politic course to follow, until its people had acquired the capacities of a self-asserting and intelligent mercantile community. At least this would probably have been best as to debts of small amount, the larger transactions being left to the operation of supply and demand.

24. To take another instance in which the hasty and unqualified adoption of a recent theory may be attended with enormous mischiefs as compared with what a close study either of Native India or of historical England would suggest. The allodial proprietor amongst the English before the conquest, the very type of an absolute owner, was yet subject universally to the three burdens of bridges, forts, and service against an enemy. When defeat and subjugation had reduced the military spirit of the people, the feudal policy of the Conqueror and his successors provided carefully that every portion of the land should be occupied by some Norman warrior bound and prepared to defend what he held as he had won it. Then came the rapid and elastic uprising of the mass of the people to a military equality with their masters; then their political equality; and parallel with this movement the growth of commerce and manufactures, leading finally to the wide application of an almost purely economic standard to the determination of State problems. But it must be remembered that while the Normans

were the efficient fighting men of the nation, the land was not allowed to pass away from their hands. It was only as the land was relieved of its duties to the State that the State became indifferent who occupied it, and on what terms. In England there has for long been no fighting caste, or rather the fighting caste has embraced the whole community. The distribution of the land therefore on purely economic principles has wrought no mischief beyond what may be portended by the sullen murmurs that are now rising from the landless class. But how is it in India? The Rajput or Maratha yeomen disappearing or sinking into indigence and despair are replaced, as the Roman freeholders were, by a class of mere cultivators living from hand to mouth, without strong local attachments, or the sturdiness which independence gives. Above these come the new race of capitalists; men possessed by no ennobling ideas of public duty, cowards as a rule by caste and confession, citizens in no sense beyond that of benefiting society by selfish accumulation. A country with such a class of landlords must soon afford a caricature that should rather startle the advocates of economics and self-adjustment as the sole or chief basis of polity. A true self-adjustment there cannot be however in a society so governed. If there were, the strong would soon take back by force what the weak had won by astuteness, and the land would once more be held by men prepared to guard their possessions. This of course is not to be tolerated; but are we to forget caste, and character, and all the conditions of

Native society until we have laboriously reduced it everywhere to a state of unstable equilibrium? In a time of trial we may need the support of the courage and home-love of the hereditary landholder, of the loyalty that springs from a diffused content. There is some room to fear that we might have at such a time to support tottering institutions with British bayonets that were all, and more than all, required elsewhere.

25. There can be no reasonable doubt that in many parts of the country interest upon interest at enormous rates is eating up the resources of the people. The rich tend to grow still richer, the poor still poorer. This is the exact condition of affairs from which the impoverished cultivators of Rome and Sparta sought relief in revolution and a repartition of the land. We may not have any movement of this kind to fear at present; but we have palpably before our eyes a class of men who without any definite policy beyond that of getting good places for themselves, or any foresight of the mischief they may do, are industriously sowing discontent through the native press. The natives too see much more than they once did of the seamy side of our English society. The conditions of tractability are thus considerably disturbed, the necessity for caution increased. On the other hand, it may be said that the way to make capital cheap is to interfere with its natural flow as little as possible. One reason that the Mofussil districts remain so backward is that the intercommunication between them and the large towns is so little developed. A high rate of remuneration for loans

will tend to draw capital and intelligence out into the country; and competition will then bring down interest, whatever form it may assume, to its natural rate. These considerations are of very considerable weight, and when transactions can be supposed to have been of the kind to which economic principles really apply, ought to determine the policy of Government. When that is not the case, the Government should decline to lend its aid to give effect to extortionate dealings. The Courts already decline to enforce contracts entered into between parties one of whom through some previous transaction holds ruin *in terrorem* over the other in order to extort some further unfair advantage. The new Contract Act provides that a person suing for the breach of a contract shall receive not all that in any case he has stipulated for, but "reasonable compensation not exceeding the amount so named." Borrowers of small sums so much oftener stand in a suppliant than in an independent relation to the lenders, that the legislature might well apply a corresponding principle distinctly to their case. Puffendorf says very reasonably that "the law of nature seems not to afford any ground for the distinction, taken by some, that by an engagement *to give*, a man is obliged to give precisely (what he has promised), while by an engagement *to do*, he is not obliged thus precisely to the specific act, but may be freed by a commutation." (B. iii. Chapter vii, 4.) In the case of all obligations for a principal of not more than Rupees 500, the Courts should have full power to treat any

interest in excess of 9 per cent. as simply penal, and to cut it down to such rate as should under the circumstances seem just. This would afford an immediate and sensible relief to the class who are really victimized by the money-lenders. Transactions for sums of above Rupees 500 are nearly always entered into by people who are able to form an intelligent judgment for themselves, and the amounts are large enough to bring wealthy and respectable men into the market as lenders. It is needless, and would probably be useless to attempt to supersede the ordinary law of supply and demand in these cases. Compound interest should be disallowed, consistent as it is with sound commercial principles, in order to make it a disadvantage to creditors to leave obligations unsettled until the debtors are involved beyond redemption.

26. There is an apparent extension of this principle which at first sight has some attractions. "Look," it may be said, "not only at the document actually sued on; but trace the transactions which have led to it back to their origin, and award no more than such an investigation shows to be just." The answer to this is that it would involve the Courts in an almost endless series of inquiries, which they could not possibly carry out with success. It is hard enough to determine in many cases whether the single transaction sued on is established or not; to go behind it would be to commit the result altogether to chance, cunning, and hard swearing. There is a vast difference too between the moral effects of reducing interest to an equitable rate,

and allowing an obligor to shirk his responsibility as such altogether. Money-lenders, too, would never know how they were situated, could not replenish their capital by loans made on a precise estimate of their assets, and would soon learn to elude the law by bandying the debtor between two or more of their class, so as to have a fresh creditor for each renewal of the obligation. These objections seem to be conclusive against such a proposal; and the debtor could not reasonably claim any further relief than would be afforded by the measures to be suggested further on.

27. The first and most important of these is a definite limitation of the power to alienate land. The Government has for the most part divested itself of that exclusive ownership which arose from the gradual increase in its demands under the native rulers; but it still has that "protective ownership" without the assertion of which, according to the Hindu lawyers, "there can be no certain rule for the protection of the subjects." It is bound too on every occasion to do that which will best promote the general welfare; and finding that the principle of free trade in land, which it adopted from the best motives, is not adapted to the present condition of the people, it may properly impose such limitations on its further application as experience has suggested. The Government should pronounce all land held from it to be either inalienable except with its assent, or else subject on alienation to a reassessment, and to the levy of a rack-rent for the benefit of the community. This principle once adopted, or re-

vived, the Government would then lay down subordinate rules for the guidance of the Collectors or other local officers, who should have delegated power in general to sanction transfers under circumstances that made them obviously expedient. A holding exceeding in extent what was necessary for the comfortable maintenance of the family or families its tenants, would be made freely alienable as to such excess. Such excess, and such only, should be liable to attachment and sale in execution of decrees. The crops, and the cattle and implements requisite for working the regulated minimum holding, should be as exempt as the land itself from attachment, and so in most cases should the cultivator's dwelling.

28. The working of the plan would be this. A ryot desirous of selling or incumbering his holding would make an application jointly with the proposed purchaser for permission to do so. As to the excess above a certain quantity the Collector would immediately grant permission: as to the minimum he would carefully consider the circumstances and allow or disallow the sale. He would generally refuse to permit the splitting up of a small holding unless something had given it an exceptionally high value. Where there was any indication of the cultivator being imposed on, or unduly pressed, he would refuse his sanction altogether. Thus the ryots would be kept on their lands except when it was plainly advantageous that they should transfer them, while changes of proprietors would not be prevented in proper cases. Orders for the execution of decrees against

land should be sent to the Collector, and should be carried out only against land held in excess of the minimum.

29. It might seem at first sight that there is an essential difference between the case of the man who has voluntarily sold his land, and that of him against whom a money decree has to be executed. But on a closer examination this difference fades away. The creditor who has obtained a decree must be allowed to use such coercion as will generally serve to make it effectual if the debtor has any means of satisfying it, and this same degree of pressure will make the land-holder sell his land. The distinction morever, if embodied in the law, would immediately give rise to a class of transactions, of which the Roman law affords an exact precedent, by which the landholder would sell his property to the money-lender, on a secret promise by the latter to restore it on repayment of the purchase-money with interest. To deal with the matter effectively the Government must deal with it boldly, and so as to prevent all evasion.

30. Native ideas, which are opposed to a sale of family property, are not unfavourable to temporary mortgages. But an unlimited power of mortgaging is virtually equivalent to an unlimited power of sale, and should be subjected to equal restraints. A mortgage is enforced by foreclosure; and if sales were restricted and mortgages not, the end would be attained by a mortgage and a friendly suit. The device would be specially resorted to in order to de-

stroy the rights which Hindu children acquire on their birth, or to make their assertion practically impossible. A mortgage with possession for a limited time, at the end of which the produce of the land is to be considered as having paid off principal and interest, restores the land after a period to the family; but if it has extended to a considerable portion of the estate it has probably plunged the mortgagor into debt, and made a fresh mortgage necessary immediately on the land's being freed from the old one. A mortgage with possession and enjoyment of the produce as an equivalent for interest alone might keep the mortgagor out of possession all his life, through his inability to pay off the principal. A rule might be made allowing mortgages with possession to be made at will, but limiting the lien on the land to a prescribed number of years, after which the amount of the loan, if not discharged by the terms of the transaction, should become a mere money debt; but this would have the effect in many cases of starting young men in life without resources or fitting employment. When, on the expiration of the mortgage made by their father, they came into possession, they would probably be loaded with debt and obliged to mortgage again. Upon the whole it seems that the best plan would be to subject mortgages and and charges on the land to the same rules of sanction as sales.

31. Leases can be so contrived as to keep a family out of its property as effectually as sales or mortgages. A long lease, or one defeasible only on some improbable

condition, ought therefore to be subject to the same rule as a sale of land. On the other hand, sickness or some other casualty may often render it desirable that even the smallest landholder should let his land for one or two years. All leases for more than one year might be made subject to the Collector's approval. Tenancies from year to year should be allowed without the necessity for sanction. They should be registered by the village officers for a small fee, and should not enable the tenant to retain possession against his landlord who desired to re-enter at the close of any cultivating season. This would prevent a good deal of vexatious litigation, and the setting up of titles in opposition to the title of the landlord. The English theory on this point which gives so great an advantage to the physical possession is attended with some benefits, but it should not be applied to cases in which the official record of the letting left no doubt of the landlord's title.

32. In thus working out in detail the principle of the Government's inalienable protective interest in the land, the question would probably arise of how those creditors were to be dealt with who, though in advancing money to a ryot they had not obtained any actual lien on his estate, yet had naturally taken his property into consideration in lending him money or seed. "We had a right to reckon," they might say, "on a fund, as available for the satisfaction of our claims, of which this protective policy deprives us." The answer should be "Yes, you had a right; that is a reasonable ground for reckoning on the availableness of this fund, but you

had not a right in any sense that involved a corresponding duty on the part of the Government. The existing law as to the liability of land for debt, on the permanence of which you perhaps based your calculations, was nevertheless, like any other law, subject to change at the will of the legislature. All that you could claim as members of the community was that it should not be changed capriciously; but no such change has been made." The matter depends on the distinction between an expectation and a right; and where a positive right over land had been acquired under the existing law, it should be respected and preserved.

33. In dealing with the general law as to the alienability of land, the important collateral question of the rights and powers of the separate members of joint village communities, and of joint families, ought to be disposed of. The ancient law of submission to the elder has long been superseded by that of equal rights vested in every male member of a Hindu family. But whether each member may dispose of his own share, or whether the assent of the whole family is necessary to constitute a legal disposition, has been differently decided by the lawyers of different schools. The view taken by the authorities recognized at this side of India, and the one most consonant to the religious basis of the family, is that all hold as it were "*per tout et non per my*;" and that all must unite to effect a valid disposition. The modern united family, with its elected or recognized manager, stands in the place of the ancient family, essentially inseparable, with its lands inalienable

except small portions by way of charitable endowment, and its manager designated by nature. Into such a body a stranger cannot be thrust without a kind of sacrilege. A casual purchaser of a share of a house may be of a caste such that his presence will necessarily exclude all the other sharers. From this has flowed the rule, widely prevalent amongst the joint proprietary bodies, that no one can be admitted as a sharer without the consent of all. These bodies, and the joint family, have no doubt become rather obstructive in this generation. They probably will not long resist the disintegrating influences that are working on them. But so long as they do subsist, and are recognized, whilst the single sharer desirous of setting up in independence should be allowed to obtain a partition, a stranger should not have execution against the common property except for the appraised value of his debtor's share, to be realized by the sale, (subject to the limitations already proposed,) of a definite and separable portion of the estate.

34. As population goes on increasing under the joint operation of native marriage institutions and the peace and security afforded by the British rule, the waste lands in many parts of the country are becoming scarce and poor. A united family may occupy a very small holding and yet there may be no other land available within a moderate distance. If one of three brothers A, B, and C, now claims a partition, his share will be too small for the maintenance of a family. Permission would soon be sought, and would have to be given, for

a sale of it. The same result would follow after a certain time with regard to the two-thirds retained by the remaining brothers. Thus in many cases that complete alienation of the land would be brought about which it would be the policy of Government to restrain. How ought such cases to be dealt with? The multiplication of the species is practically beyond the control of the Government. What it can do is to prevent that multiplication from leading to an infinite subdivision of the land held by the poorer cultivators, and thus to their forced withdrawal. In a suit for a partition, a division in specie into fragments individually smaller than the recognized minimum requisite for the support of a family ought not to be permitted. Instead of it, the plaintiff and his opponent should each be called on to place in the hands of the Court his private estimate of the value of the whole property. The highest bidder or bidders should receive the property, the others receiving from him their shares of its valuation according to an estimate higher than their own. Some sharers would thus be ousted; but it would be *some* in most cases instead of *all*, who would have eventually to go out if no provision were made; and those who remained in would preserve the hereditary connexion of the family with its lands. In case no member could produce the money to buy out the others the whole property should be sold and the proceeds distributed. This would apparently be a harsh measure; but there is a degree of indigence below which people cannot be landowners with any benefit to themselves or to society; and the

knowledge that a sale would take place would prevent suits for partition whenever any reasonable voluntary arrangement could be made amongst the members. These would all know that their common interest was involved in having the land, which creditors could not attach, rather than the sale proceeds which they could.

35. Above the class we have been considering comes that of the Zemindars holding lands which they sublet in farms either to hereditary or to casual tenants, retaining only a small portion of their estates in their own hands. They vary as to pecuniary means from a condition of great poverty to one of affluence. Many of the most ancient families of this class seem to be perishing away, or sinking into hopeless indigence, by a process as certain and inevitable as that which is working on the smaller landholders. All who are acquainted with the districts in which these decayed gentry abound, deplore the condition to which many of them are reduced; but compassionate instincts are the most hazardous basis for political action. Against their promptings, and the arguments by which they are supported, must be weighed the considerations urged by the opposite school, which deems it a law of nature that the weaker should go to the wall, and sees nothing but advantage in proprietors who have capital taking the place of those who have none. That these considerations are of great weight and importance cannot for a moment be denied. The Government cannot for ever go on sustaining a feeble class too nerveless, and too steeped in false pride, to make any exer-

tion for themselves; and it is the tendency of aid of this kind to create a need for still more aid, and a feeling of a right to it which causes intense resentment when in the end it has to be withdrawn. It is a necessary result of our rule that the class of intelligent adventurers who adapt themselves to the new conditions should grow rich, while those who do not grow poor. "Or dans une société," says Tocqueville, "où la richesse se déplace, les rangs sont bien près d'être renversés." Money has a weight and influence which will find exercise in some channel; and the natural desire to possess land cannot with safety be replaced by a craving and a struggle for employment under Government which in France "devint la source commune des révolutions et de la servitude." An effective desire of accumulation is set to work by smaller returns from land than from any other investment; and thus freedom of transfer leads to national economy. English civilization too must in the main radiate from the great towns; and the spirit of improvement is most likely to be developed in those who become proprietors unhampered by the conventions and prejudices that embarrass moneyless landlords of old pedigree.

36. But again we must remember that it is not a European country that we have to deal with, but India, with its classes sharply marked off, and with the character and capacities of each too uniformly moulded to admit of sudden change. Opium is a pernicious drug, yet its unreserved withdrawal may cause death. On the "greatest happiness" principle, therefore, some time

ought to be given to the zemindars to adapt themselves to the inevitable change, some means, if possible, provided by which they can escape its threatened effects. Even on purely economic grounds it may be urged that the money which new men invest in land would otherwise be profitably employed in commerce; while the class who receive it as vendors almost invariably squander it in fruitless prodigality. It might therefore be expedient from this point of view to impose some check on the license of sale and encumbrance; since it may well be that men who are useful members of society as landlords, still need some protection against their own improvidence, which, left to itself, must make them at once landless and useless, or worse. The enterprise too of the newly-enriched has not shown itself thus far capable of doing much in the way of improvement. The requisite operations, to be carried out profitably on a really beneficial scale, must rest on a diffused and penetrating sense of duty; the employer must know that his labourer can be trusted to do an honest day's work, the labourer that he will receive an honest reward. This moral change, under which shirking on the one hand and oppression on the other will become almost impossible, has still to be wrought out. At present there is a certain kindliness in the relations between the old proprietors and those under them, a traditional acquiescence in their relative positions and the customary rights and duties which these involve. When a new race of landlords comes in there is a con-

test between sheer greed, unqualified by any wholesome indolence, on the one side, and obstinacy and evasion on the other. In our political speculations we usually allow economics, when they are concerned at all, to occupy the whole field of view; but a mere conflict of antagonistic interests, untempered by mutual regard, or by humane and moral considerations, is an impossible basis of society. If through our blind faith in chance we abandon the existing organization to influences that we see must be destructive, and let go our hold on the ordering of events, we may probably find by-and-bye that they have passed altogether beyond our control.

37. To keep the wealthier families together in a position of social superiority, they must be endowed with the means of securing their estates against the chance recklessness of at least one generation. This might be effected by a system of family settlements authorized by the law. The owner of land, with the concurrence of those, if any, whose assent would be necessary for a sale, could be empowered to make a voluntary settlement of it for a life and a majority beyond his own; or else for a definite period of fifty years. Six months' notice of the intended settlement should be published; and the particulars of the property intended to be embraced in it should be recorded in the local registry office. Within the six months all persons claiming in the lands an interest not admitted in the document registered, should require their claims to be admitted by supplemental documents, or else file suits to establish their rights.

No pre-existing claims except the ones thus admitted or proved should operate against the settlement; nor should it be liable to be affected by any subsequent transactions except in the precise way allowed by the law. This should make provision for leases, at not less than one-half of a rack-rent, for any period not exceeding 7 years, at the will of the tenant for life, and for any time not exceeding 21 years on conditions approved by the Collector or other local representative of the executive Government. For sanctioned improvements money should be obtained under the Land Improvement Acts as a charge on the property, or by a sale approved by the Collector of a portion of the estate. If the circumstances of the family, or of the property, had become so entirely changed that the maintenance of the settlement would be obviously mischievous, it should be open to the tenant for life to apply to the District Court for its rescission. Six months' notice should be given for opponents to come forward; and in decreeing a rescission the Court should be at liberty to put a portion of the property into a fresh settlement. A new settlement should be competent to each tenant for life in succession.

38. The law giving effect to settlements might provide or not for dowers and portions. If it did not provide for them, the landholder would naturally leave a portion of his estate out of the settlement in order to meet such charges; but it would probably be better to allow charges to be laid upon the property to the extent of some definite proportion, as one-fourth or one-sixth,

of its value on descent; the ratios of the dotations *inter se* being regulated by the law of the parties. The doctrines of the English Law as to voluntary settlements should be expressly excluded.

39. The sagacious designs sometimes ascribed to Henry VII. and his counsellors may perhaps not have actuated them in passing the Statute of Fines; but the notion could not have arisen unless the freedom of alienation which it gave to tenants in tail had in fact been followed by very extensive transfers of property, and a marked decline of the nobility. The change of habits then coming over society presented great temptations to landowners disposed to extravagance. The great development of commerce furnished a new class with money to become purchasers. A similar state of circumstances in India at the present day is producing similar effects, which here however the constitution of society, and the character of the people, make perilous to the future of the country. Instead therefore of allowing existing restraints on the transfer of estates to be nullified, we ought to enable new restraints to be placed on such transfers, subject to the conditions that a full consideration of the subject may suggest. It would indeed be a vain expectation that the Government could by its legislation prevent the natural fruits of sloth and improvidence being reaped by landholders who persistently refused to rise to the level of their generation. The French noblesse continually grew poorer in spite of all the means employed for tying up estates. "Neanmoins ils s'appauvrissaient partout dans la propor-

tion exacte où ils perdaient leur pouvoir," while "les roturiers seuls semblaient heriter tout le bien que la noblesse perdait." To raise up a permanent barrier against such a state of things we must attach serious, honourable, and beneficial duties to the position of a land-owner, while we avoid vesting it with vexatious privileges, which as knowledge and ambition widen would grow intolerable. But we should also afford time for a change of character to take place before the ruin of the present landed gentry is quite effected; and allow them, if they will, to guard against the dissipation of their estates while the indispensable course of education is gone through. The same protection is indeed necessary for the properties of those who have risen to affluence and acquired estates under the British rule. Like the English in Ireland, the descendants of those men are determined, after a generation or so, in all their chief tastes and habits by the influence of the society of which they have come to form a part. If that society is prodigal, and averse to culture and mental exertion, so will they be. Until the general tone is improved, our own local aristocracy will enjoy no more than an ephemeral existence, if the road to ruin be laid wide open to the scapegrace sons of thrifty fathers. This continued disappearance of families either of old repute, or just as their honours are mellowing by time, must be of the most serious import. India, which we are striving to make a political community, has no political history, no historical consciousness generally diffused, out of which a true nationality can be developed to give form and impulse

to its future. Families of distinguished social position, impelled to a certain loftiness of feeling by the pride of ancestry, and acting on hereditary principles of political conduct, are virtually indispensable in such a community. In them, and in them alone, the sense of public honour maintains its existence. They use without effort an habitual power of command; and form a nucleus of organization in the midst of what is else a mere chaotic mass of human atoms tending to no common centre as they are drawn by no common force.

40. The measures already suggested would throw such safeguards round the ownership of land that any further amelioration of the law might seem to be almost superfluous. To give effect to them, Sections 280-282 of the Code of Civil Procedure would have to be modified so as to enable an imprisoned debtor to obtain his discharge without giving up his holding and the implements and stock necessary for working it. Then if the decree were for less than one hundred rupees the Court in ordering his discharge might absolve him from all further liability. Thus the poorer debtors would seldom except in cases of misconduct be reduced to absolute beggary. But a law of insolvency is required both to provide for the cases of a class standing just above the lowest in the social scale, and to prevent the scramble that now sometimes takes place amongst the creditors. It is required too, supposing laws for the general preservation of landed property be passed, in order to provide for the punishment of criminal recklessness

or fraud in incurring debts. It should enable the District Courts, notwithstanding these laws, to dispose at their discretion of the debtor's interest in his lands. It should also enable them to deal freely with the several claims on the insolvent according to their nature and origin, in order to place moderate and honourable creditors on an equal footing with those who had obtained unfair advantages, either by unconscientious pressure, or by what would be still more common, the connivance of the insolvent. They should have power, in cases of marked prodigality, to place such property as might be reserved for the family in the hands of trustees subject to the orders of the Court. The connexions of the members of a family are indeed too intimate to admit of any arrangement by which the folly or crime of one shall not be the misfortune of all, but something may be done to alleviate the misfortune. Society is interested in getting reckless insolvents punished, and honest ones set to work again as soon as possible, and in procuring a prompt distribution of all available assets. As trade is developed, and the dependence of traders on one another becomes greater, an insolvency law becomes as necessary for the Mofussil as for the Presidency towns: its partial operation is a source of hardship. On all these grounds it seems desirable that an insolvency law for the Mofussil should be passed without delay. If made effective it would to a great extent answer the purpose of the other protective measures above suggested, supposing these should be thought to go too far. If they should be adopted it would usefully sup-

plement them. The draft of such an Act for the Province of Sind was lately submitted for consideration; and the remarks made in forwarding that draft have much more than a merely local application. "In framing an Insolvency Law for an Indian community, careful attention should be paid to the native law, the constitution of native society, and the peculiar conditions that it presents as to the relative intelligence of its members. These circumstances make it desirable, and even necessary, that an insolvency law should expressly direct advertence to be had to the family claims arising under the Hindu and the Mahomedan law, and that it should vest in the Courts a liberal discretion for dealing on equitable principles, and even by reference to rules of policy, with the claims advanced against an insolvent."

41. Such are the considerations, stated in outline, on which, in the writer's opinion, a claim may be rested for the several measures he has ventured to propose. And if these considerations are such that they should have weight with the Indian Government, they deserve also the careful attention of the Indian community. Legislation in the sense suggested must from its novelty necessarily involve many practical difficulties. It is possible even that these difficulties may be insuperable unless modifications are admitted for the express purpose of avoiding them. The operation of the laws would be on the largest scale, attended with results for good or evil of incalculable importance. The principle and the probable working of each should therefore be examined from the manifold points of view supplied only by the

experience and the interests of a society composed of diverse elements. It is with the hope that competent critics may be moved to such an examination, that discussion may be stimulated, and the elements of a just decision arrived at, that the foregoing observations have been laid before the public. An exhaustive treatment of any one of the proposals would obviously extend far beyond the reasonable limits of an essay meant to be read through at a single sitting; and the several measures are so connected with each other that no one can be properly appreciated apart from the rest. Roughly drawn, therefore, as the plan may be, the author has thought that it had better be submitted thus to the tribunal of public opinion, which would probably excuse faults of detail if it recognized a practical comprehensiveness of design, than frittered away in separate investigations of particular and partial projects of law. It is almost needless to observe that whenever it takes up the work that circumstances are preparing for it, the Government of India will find the task one of almost immeasurable labour and anxiety. It needs the stimulus and the support of an exacting, yet generous and enlightened, popular opinion. In the forming of this much has yet to be done; but the desire to arrive at sound views of public policy is now so generally diffused that much will surely be excused in any not wholly presumptuous contribution to the inevitable controversy.

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PAPERS

MEENA DACOITS

AND OTHER

CRIMINAL CLASSES OF INDIA.

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PREFACE.

It is not only desirable, but of the greatest importance, that Police Officers should have an intimate knowledge of the professional robbers and thieves who infest these Provinces. These are of various castes or tribes, each having a system of its own, and generally its own agents and receivers. Enquiry into these tribes, and suppression of their profession as plunderers of Society, are duties which have been specially entrusted to Deputy Inspectors-General, and the Annual Reports of these Officers will, it is hoped, within a few years supply extensive and practical information.

The records of the past are generally full of useful information, though to a lamentable extent shelved in the Record Offices of Government.

In order to be practically useful, all information obtained of any one tribe or gang of professional Criminals should be collated and brought together—all that may hereafter be obtained being appended to the papers relating to that particular gang or tribe; and by this process there is no doubt but that, in a short time, the systems, methods, and practice peculiar to each association will be clearly exposed and made known, and there will then be facility where there is at present difficulty in detection.

All Officers of Police, and more particularly Deputy Inspectors-General, are expected to assist the scheme by forwarding to the Inspector-General of Police whatever valu-

able information they may obtain of such tribes, whether gathered from confessions or from evidence collected in the course of trials of individual cases.

The paper now forwarded is a reprint of a published report by Lieutenant-Colonel Williams, late Superintendent of Military Police.

By order,

CHARLES A. DODD, LIEUTENANT,

Persl. Asst. to Inspr.-Genl. of Police,

North-Western Provinces.

PAPERS

ON

MEENA DACOITS.

ZIMANIA DACOITY.

On the 14th July, 1850, a dacoity was committed at Zimania, a village five miles from the large Military Cantonment of Neemuch: property to the amount of Rs. 27,000 was carried off and five men wounded. It appears that a Mewatee jemadar named Peer Dhan was employed by soucars to furnish trustworthy guards for treasure consisting, generally speaking, of bars of gold, gold-mohurs, pearls, and other jewels conveyed by carriers.

Treasure of this description was sent from Bombay by Hursahie Mull and Goorsahie Mull to certain bankers at Jeypore, and entrusted to five carriers, who not being furnished by Peer Dhan, he considered it right to ease them of their burdens, and therefore arranged an attack with certain Meenas kept in his employ for guards. Thirteen Meenas were told off, headed by Buxsa and Mungna, sharp, intelligent, and active leaders. Buldewa, a Meena, kept his brethren well informed of the carriers' movements, who were also quietly watched by two brahmins from Kotepootlee. On the treasure party reaching Zimania on the 14th July, 1850, and putting up in a bunneea's shop, a sudden attack was made upon them between 8 and 9 P. M., which proved highly successful, as the marauders

carried off pearls and others jewels, bars of gold, and gold-mohurs, amounting to Rs. 27,000, but not without resistance, for two of the dacoits were wounded with arrows in the shoulder and leg. The parties attacked, it would appear, were armed with daggers, bows and arrows, and all five were slightly wounded.

So daring a dacoity, committed in the very presence of the Commissioner of Jawud Neemuch, caused no small stir, and the Police being active and zealous, the result consequently was the arrest of seven of the dacoits concerned; one of whom escaped, and one died before committal—the remaining five were all sentenced to fourteen years' imprisonment. Peer Dhan finding the affair blown, fled, but being carefully hunted down, was apprehended, tried, and sentenced to transportation for life. Nearly Rs. 7,000 worth of property was recovered, which is surprising, considering it had got into the hands of Meena dacoits, but it appears that Goorsahie Mull's gomashta made private arrangements with the dacoits, and thus induced them to relinquish their shares of the plunder, they even stating that the gomashta got Rs. 100 from each dacoit. I have now to remark on the two leaders, Buxsa and Mungna, both noted men, and who were not again heard of till they appeared in the Doora and Putsal dacoities. It is said that they were diligently sought for, and not found; but I am informed that they merely removed three miles from the house, in which they were born. It was perhaps owing to the assistance given them by Chirag Ali, thannahdar of Kotepootlee, that they so long escaped detection, and were thus enabled to commit subsequently two dacoities in the district of Agra.

When the Deputy Magistrate of Iradutnugger was at Kotepootlee in the beginning of 1855, these two men came

in on promise of pardon for the Doora and Putsal dacoities. These cases being made over to me for investigation as Joint Magistrate in the Agra district, I reluctantly ratified the pardons, for I strongly suspected Mungna of being a leader, and felt sure that Buxsa was one likewise. During my investigations, I got a trace of the Zimania case, and that Buxsa and Mungna were implicated, and though not in the Dacoity Department, I at once recorded their confessions. The Doora and Putsal cases being committed to the Sessions with satisfactory results, the two pardoned men were allowed to go free. I thought it advisable to have them closely watched, and here I must record my testimony, that, so far from again falling into bad company, they did their best to ferret out crime, and at the very moment of their apprehension were doing good service to Government in tracing out a highway robbery for the Magistrate of Dehli.

On being appointed an Assistant in the Department for the Suppression of Thuggee and Dacoity, the Zimania case came before me on the apprehension of Saidhoo, son of Laloo, concerned in that affair, and with it the recorded confessions of Buxsa and Mungna, and it being proved by the statement of six dacoits that these men were leaders in this daring attack, close to a large Military Cantonment in the British territories, I considered it my duty to cause their arrest to answer to this charge with the prisoner Saidhoo, and all three were sentenced to transportation for life.

Confession of Mungna, Meena, Chowkeedar of Powanah in Jeypore.—Some six years ago my brother Jeyta; Buxsa, son of Mokunda, resident of Powanah; Bulla, son of Oomda, resident of Moonda; Kheree, son of Napa, resident of Dewta; and Buxsa the 2nd,—I do not remember.

his father's name, but he lived at Bhatarec—took service with Peer Dhan Thakoor at Mundsore. This man was employed by the soucars or bankers to furnish escorts for treasure, and we were repeatedly sent on this duty. After we had been with Peer Dhan some eight or nine months, a bunneea, named Chota Lall, informed him of the despatch of treasure and jewels from Bombay to Jeypore. Arrangements were made to plunder the carriers. The bunneea, Chota Lall, with two brahmins from Ketepootlee, and a Meena, named Buldewa, were sent to gain correct information of the movements of the party, and we were told by Peer Dhan to be prepared to start at a moment's notice. The two brahmins and the bunneea came back with information, leaving Buldewa, Meena, to keep the party in view.

Peer Dhan appointed eight others, making our band thirteen, Buxsa and myself to be jemadars. We followed the treasure party; till they put up late one evening in the house of a bunneea, in the village of Zimania, when we made preparations to attack them, about 8 or 9 o'clock at night. The men resisted, and two of Peer Dhan's dacoits, named Jowahir and Sookhoo, were wounded by arrows, the former in the shoulder and the latter in the calf of the leg. We had to fight, and the men of the escort were wounded by our swords. The plunder was valuable, and consisted of bars of gold, gold-mohurs, pearls, and other jewels. Peer Dhan took half, and divided the remaining half between his people and our party. Hearing that search was made, we sent our shares of the pearls home by the two brahmins; the gold bars and gold-mohurs were buried, so that we might return empty-handed. After a while I sent my brother Jeyta, accompanied by Jowahir, to bring home the gold we had secreted. Pass-

ing through Jeypore, Jowahir was arrested, but my brother Jeyta got safe to his home, and on his arrival the plunder was distributed. Jowahir turned informer, and came with the soucar's gomashta, Keali Ram, who took an oath that if we delivered up his master's property, he would not prosecute us. We collected all the pearls and jewels, and made them over to him, but could not recover the gold and gold-mohurs. We therefore agreed to pay Rs. 100 each on receiving a bond of release. The gomashta promised to let us know, but in three or four months he returned with Jowahir, and wished to arrest us; the Rs. 100, therefore, was collected through Bhowanie, sonar, but whether he paid it or not I cannot say, though after this we were not molested.

JELAYSUR DACOITY.

On the 28th May, 1854, a dacoity was committed on the premises of Sewa Ram and Sudda Ram, bankers of Jelaysur, in Zillah Muttra, and property plundered, valued at Rs. 27,828-4-0.

There were 25 dacoits engaged in this affair, which was planned by Khana, Hunwunta and Punna, Meenas of Goontie in Ulwur, who arranged with Kirpa, a noted Meena, jemadar of dacoits, of Moondha in Jeypore, to join them with his band. The party assembled at Goontie and proceeded *vid* Hursole and Keshungurh to Bindrabun near Muttra. Having performed their devotions at the holy shrines there, they crossed the Jumna to Hattras, put up in a grove of trees near the city, and arranged for the dacoity that evening. They started so as to reach

Jelaysur about 9 P. M.; the two camels were left about a mile from the city, under charge of two of the party, five were armed with loaded matchlocks, and the dacoits entered with drawn swords and lighted torches shouting "mar, mar."

Jelaysur contains a large number of inhabitants, and had a strong Police force, but the dacoits met with no resistance. All appeared paralyzed at the boldness of the attack. Meenas do not usually maltreat or wantonly wound where resistance is not offered; it was however otherwise in this case. Sewa Ram, who was occupied with his banking books, was wounded by a sword-cut; his two gomashtas, Gunga Ram and Jeet Mull, were settling a loan with two kachees, named Hoolasee and Jhoona. Gunga Ram lost his right hand by a sword-cut, Jeet Mull was slightly wounded, and both the kachees, Hoolasee and Jhoona, received sword-cuts. Thakoor Dass was dangerously wounded by a matchlock ball in the abdomen, from which he afterwards died, and Nunhey received a ball in his thigh. The dacoits appear to have used their weapons recklessly, not only to alarm and terrify the inhabitants by firing matchlocks, which is always done to prevent opposition, but in this case, for the purpose of shedding blood. They remained nearly an hour plundering, and though the Police station was close to the house, no attempt was made to oppose them. They in consequence retreated leisurely, taking with them plundered property valued at Rs. 27,828. The shares were high, each dacoit receiving about Rs. 280, three extra shares were allotted to the Goontie leaders, two for the camels and one for charity, which would make nearly Rs. 9,000. Some of the dacoits were, however, eased of their booty by a party of the Customs Police.

Confession of Kirpa, Meena, Chowkeedar of Manendha, Jeypore.—I am an old man, seventy years of age, and have

given myself up in the hopes of saving my son Ghasee, who has been arrested for the Jelaysur dacoity; if his life is spared, I will relate all. The fact is, that in April, 1854, I was on a visit to my Meena relatives at Shahjehanpore. Returning through Ulwur, I put up at the house of Khana, Meena, who resides at Goontie. Whilst there, Hunwunta and Punna, Meenas, told us that they had received information from a Meena of Bhurtpore, (I do not remember his name) of a rich banker in the Muttra district, and proposed that we should organize an expedition. I excused myself on the plea of old age, and that the informer's terms were extravagant, for he required four shares. Khana, however, persuaded me to join, and it was decided that our spy was to get two extra shares if we got a rich booty. Ultimately twenty-five dacoits assembled at Goontie; I can name all but the Meena from Bhurtpore. We went *vid* Hursole and Keshungurh to Bindrabun; here we remained a day, performing our devotions at the holy shrines, then crossed the Jumna, and thus to Hattras, where we all assembled in a grove of trees, and decided on attacking the banker's house in Jelaysur that evening. We started so as to arrive about two hours after dark; this was in May. Hunwunta knew the house, and the Bhurtpore Meena was with us; we had five matchlocks; these were loaded; torches prepared and lighted, and leaving our camels with Rajoo and Nursingha, we rushed into the town with drawn swords, shouting "mar, mar." On seeing us, all fled; the Police did not interfere, and we commenced plundering the banker's house. He was sitting in the open verandah with others; I believe some of them were wounded, but they soon ran away; the men with matchlocks fired rapidly to frighten the people. We remained more than an hour plundering, and got a rich booty, which was placed on camels in charge of Hunwunta, Khana, Zora, and

Punna. The latter said he had been stopped by the Customs house Police, who had searched him for contraband salt, and finding the jewels they had taken them. I cannot tell whether this is true, but he could not produce the share of the plunder on his camel. Our shares came to more than Rs. 250 each. I cannot exactly say how much, but it was nearly Rs. 280. We all met at the house of Nahara, Meena of Kirwas, near Keshungurh; some of the jewels were broken up and thus sacrificed; others were sold, and some of them divided amongst the dacoits at a valuation. I got six gold bracelets, one pair of anklets, three gold earrings, two large and two small necklaces, some gold beads, bits of gold, and 20 Rs. cash.

I got nothing by this dacoity, for being indebted to Pudma, son of Dubola, a bunneea of Manondha; when he heard of the distribution of the plunder, he lodged a complaint about the debt before the Thakoor, who placed me in irons. The debt being Rs. 600, my son Ghasee and my nephew Tonda gave up their shares, which with mine were made over to Pudma, bunneea. They must have been worth nearly Rs. 800 or more, but he only gave me credit for Rs. 450, and giving me Rs. 50 for my expenses. Khana and Hunwunta were the leaders, and got double shares; the informer got three shares, and each camel had a share extra. At Bhyro's instigation some of the dacoits had assembled and were on their way to give themselves up, when they met Vuzeer Singh, Kamdar of Jeypore, with the son of the Rao of Patun and his foujdar, who told them that their Government would be displeased if they confessed they were dacoits, as the Government would then be blamed; the men therefore returned to their homes. I however came in to save my son's life; he is my adopted son, and has been brought up on my knees. I am now an old

man and cannot live long, and would give my life for his. I know of other dacoities: Purta, son of Likhoo, resident of Patum in Jeypore, who is married to my daughter, gave me the particulars of the Boolundshuhur affair. This dacoity was planned by Bhyro, jemadar, and his brother Bukta; the latter was sent by Bhyro, with my son-in-law Purta, to Delhi, who got service with a soucar of that city; he remitted cash, about Rs. 5,000, with pearls and jewels to another firm down the country. The money and jewels were placed on a camel, a brahmin in the employ of the soucar sent in charge, and the two Meenas, Bukta and Purta as escort; information was sent to Bhyro, who, with Bulla, son of Girdaree, *alias* Gheeda, Shewjee, son of Nirbba, and two others, whose names I do not know, overtook the camel near Boolundshuhur; Bukta and Purta had brought over the camel man, who fled with the camel on the attack being made; the brahmin was thrown and wounded on the knee by one of the dacoits. The chief part of the plunder was buried, and the dacoits returned home with what they could carry. Some months afterwards, when all was quiet, Bhyro and Purta recovered the money and jewels; they kept the greatest share, but I have heard that Rs. 80 was given to the camel man.

ATTEMPT AT A DACOITY.

In the end of September, 1854, twenty-nine Meenas, residents of Kotepootlee and the villages in its vicinity, left their homes, with the intention of committing a dacoity in mouzah Doora, pergunnah Futtehpore Sikree, in the Agra district. This expedition originated with Pudma and Lukha, Meenas of Kirwas, pergunnah Kotepootlee, who arranged it with Buxsa and Chundoo, both noted dacoits. The party started from Kotepootlee in three

divisions, and proceeded through Ulwur *viâ* Neem Chana, Talberch, Bheejwar, Taintra, Bhopore, and through Hellendh, Hoollah, Barooah of Bhurtpore, entering the British territories at Dabur, three coss from Futtehpore Sikree. The leading division under Buxsa in passing the thannah of Futtehpore Sikree, and being challenged by the Police, replied they were from Jeypore, proceeding to Gwalior for service, and passed on taking the direct road to Doora, where they awaited the arrival of their companions, whose non-appearance causing alarm, they dispersed towards Bhurtpore. Another band, headed by Chandoo, passed through Futtehpore Sikree, unchallenged, but on account of heavy rain, put up for the night in an old building near Futtehpore, and there consulted about the proposed dacoity at Doora; but the other parties not joining them, they also took the road to Bhurtpore early the next morning.

The third thoke, commanded by Pudma, took a bye-road, thus avoiding the thannah and missing Buxsa's party; they reached mouzah Oudheyra, one mile from Doora, late in the evening, and it raining heavily, remained there during the night.

The next morning Pudma proceeded to Futtehpore Sikree in search of the missing bands; but not finding them, returned to Oudheyra, and with Bulla, Goojur, went to Doora, hoping to meet them there, intending, if successful, to commit the dacoity that night, but getting no trace of them, Pudma's band on the following morning also took the road to Bhurtpore. The expedition having thus failed, the dacoits passed through Bhurtpore and Combhare to Burkhera, from whence the greater number of them returned to their homes. The leaders assembled in the house of Dhunna, a Meena chowkeedar of Burkhera and a noted dacoit, who

proposed their remaining and not going back empty-handed. Mungna promised to return in October, but on his arrival at home, news of his wife's death prevented his fulfilling the engagement. Buxsa, his brother Sewa, Bishna, Punna and Gheeda, all concerned in this abortive attempt, remained with Dhunna at Burkhera.

PUTSAL DACOITY.

It is supposed that two Goojurs, named Amalook and Suddasookh (brothers), formerly in the employ of Buxee, a mahajun of Putsal, but who had left him on account of ill-treatment, gave information out of revenge to Dhunna, Meena, chowkeedar of Burkhera, that in the mahajun's house there was money, as he collected the village-rents; that his woman wore jewels, and that he had fine camels. Dhunna mentioned to Buxsa the information received from the Goojur, and sent him, accompanied by Gheeda, on a camel to Putsal; they saw Hoolasee, the father of Buxee, mahajun, and enquired of him regarding Suddasookh, Goojur, but was informed he was absent; they smoked with Hoolasee, who also gave them *bhoosa* for their camel, and thus had the opportunity of viewing the house to be attacked. On Buxsa's return from Putsal, Dhunna arranged the dacoity, sending Medha, a brother-dacoit residing at Burkhera, to collect a party; eventually fifteen men, headed by Dhunna, Buxsa and Cheema, assembled near the jheel at Putsal on the evening of the 12th November, 1854. At 9 P. M. they proceeded to the village; Sewa, brother of Buxsa, climbed the wall of the house, and let in the dacoits, who deprived two women, Rookma and Jankie, of the ornaments they wore, took a few clothes and decamped. The mahajun, Buxee, fortunately

had left Putsal during the day, with the collections, to pay them to the tehsceldar of Futtehpore Sikree, and thus escaped.

He rated his loss first at Rs. 197, and then at Rs. 245. The dacoits valued their booty at about Rs. 50. The jewels were sold by Dhunna's senior wife to Buldeo and Pursa, sonars of Nugger, for Rs. 35. Dhunna is said to have appropriated eight or nine rupees of the plunder, and the rest was divided by Buxsa, each share being Rs. 2, with one extra share to Dhunna, who planned the dacoity, and one for the camel. The dacoits returned home, but Dhunna was arrested by the Political Agent of Bhurtpore, for a theft committed in the Ulwur territories, and was found in Jail when required to answer for the Putsal dacoity.

DOORA DACOITY.

In November a second expedition to Doora was planned by Pudma and Salga, brother of Buxsa. Thirty-four dacoits assembled at Rajnota, and, as on the former occasion, proceeded in three divisions, without hindrance, through portions of Ulwur, Jeypore and Bhurtpore, varying their present route by passing through Ujjubghur and Dheara of Ulwur, to Kharow to Jeypore; this they did to enlist the services of a noted dacoit, named Zalim, residing in Kharow; thence to Bhurear and other villages in Jeypore, entering Bhurtpore near Bullumghur, and thence into the British territories as in the previous attempt, but going direct from thence to Doora. Mungna and Bulla, Goojur, preceded the party on a camel to reconnoitre the house of Radha Kishen, and to see that the coast was clear. Bulla, Goojur, who had been to Doora with Pudma on the former expedition, pointed out to Mungna the house to be attacked,

and proposed that both should draw water at a well opposite, in order that they might have a good opportunity of viewing it. They changed a Madhopore rupee at the shop of the shroff Radha Kishen, and bought opium from Jowahir, tobacco and opium-seller.

They then returned and met the dacoits a few miles from Doora, when it was decided to commit the dacoity that night, for Pudma and the other leaders had heard of the Putsal dacoity, and that parties of the Police were out in search of the perpetrators.

About a mile from Doora their three camels were left in charge of two of the party. Four torches were prepared and lighted the matchlocks loaded, swords drawn, and they rushed into the villages shouting "jye jye." Guards were placed at the approaches to the house of Radha Kishen, who kept continually firing, to intimidate the inhabitants, whilst the rest of the dacoits hacked a large hole in a very strong outer door to enable them to remove a bar, and thus enter the house. Mungna got on to the roof and shouted out he was sent to arrest a murderer, and if any one interfered, it would be at the risk of their lives.

Hema, a lad of 16, was found secreted in an upper room, but the dacoits committed no personal violence, and even allowed the women to escape. They remained nearly two hours plundering, and it is said, that in forcing open a door, strongly guarded with iron bars, one-half fell on a box containing Rs. 17,000, which thus escaped observation; the plunder was taken to the camels, loaded, and the dacoits decamped unmolested.

The village of Doora contains nearly 3,000 inhabitants, mostly Jats, and had several rich mahajuns residing in it.

A Police chowkee is stationed in the village, but the burkundazes were absent on duty, and only a Duffadar and two chowkeedars present, who could do little or nothing; and though they applied to the zemindars and inhabitants to aid them, no attempt at resistance was made. Radha Kishen deposed he lost property to the amount of Rs. 12,524. The dacoits state they got about Rs. 6,000. The plundered property was divided into 40 shares of Rs. 150 each. There were 34 dacoits, each of whom got a share, an extra share was allowed to Pudma, who planned the dacoity, three shares to the camels, one share in charity, and one divided between the three zemindars. The jewels were broken up by an axe and chisel in the house of Zalim, and then sold. The dacoits never get the full value of the plundered property, and are always cheated by the bunneeas and jewellers. We therefore may suppose that the proceeds of this daring dacoity amounted to 8 or 9,000 Rs., a large sum to them, and one that, if retribution had not overtaken them, would have tempted to still greater outrages.

MOONDIA DACOITY.

A BAND of 26 dacoits, chiefly from Jeypore, under Jemadars Gopal and Hunwunta, committed a dacoity on the night of the 22nd January, 1855, on the premises of Sookhoo Bhorah, resident of Moondia, pergunnah Akighur in the Bhurtpore territories, and carried off property to the amount of Rs. 610. No personal violence was offered, no resistance being made, and the Police not attempting to interfere. Whilst investigating the Doora dacoity, one of the prisoners, named Doorjun, confessed that three months after he had committed the Doora dacoity, he was

implicated in that of Moondia, and named twenty-six of his accomplices. Mundora, Dyalla, Shewjee and Purta, who were apprehended, also confessed.

Parties of the dacoity Police were in search of the rest of the band, but Medha had only been arrested when the revolt of 1857 temporarily closed operations.

SIRSA DACOITY.

On the night of the 12th January, 1855, a dacoity was committed on the premises of Dyal Dass, mahajun, resident of mouzah Sirsa, pergunnah Khyraghur, district Allahabad, and property to the amount of Rs. 20,000 plundered. Sheo Narain, bunneea, was killed in the attack; Sree, Hujjam, died nine days after from the effects of wounds received, and eight others were also wounded. This daring dacoity was committed about 7½ P. M., in the midst of a large village, on premises with strong iron-bound gates, and in the face of a Police force of one jemadar, four burkundazes, and twelve chowkeedars.

The dacoits however numbered thirty-nine, headed by three noted leaders, Chokla, Pudmulla and Sookhdeo, determined men, well armed, and with excellent information derived from Saidhoo, an aheer burkundaz, regarding the locality. A reward of Rs. 1,000 was offered by the Magistrate of Allahabad for information, but without success; a strong suspicion however existed that the perpetrators of this daring outrage were Meenas of Ulwur and Joypore. Whilst investigating (as Joint Magistrate of the district), some cases of dacoity committed in the Agra zillah, I sought information from the Meenas concerned; and on the 15th May, 1855, Bukta Meena made deposition that

his two cousins (Rutna, Medha, and also two leaders, Chokla and Pudmulla) were concerned in the Sirsa dacoity. On the 17th August, 1855, further information was gained by Mr. Drummond, zillah Magistrate, through Ramsook, Meena of Shahjehanpore, confirming Bukta's statement, implicating the Meenas of Shahjehanpore, and that certain Meena jemadars, in the service of the Ulwur Rajah, were suspected of aiding and abetting the dacoits. On reaching Ulwur, I found the Rajah's three chief Meena jemadars had fled, but learnt that a Meena named Khana was willing to give himself up; make a full confession and disclose the names of all his associates. He was brought in by a cousin of his, most fortunately missing a party sent (it is believed) by the Rajah's Meena jemadars from Shahjehanpore to bribe him to secrecy.

Khana freely and fully confessed all the particulars of the dacoity, naming 36 Meenas residing in Shahjehanpore and its vicinity. Spies were immediately sent out to discover the whereabouts of these individuals. The chowkeedars of villages around Shahjehanpore being summoned on the pretext of searching for stolen cattle, Buldew, Meena, chowkeedar of Jalas, a village about two miles from Shahjehanpore, was captured, and also made a full and free confession, the more valuable from his residing so close to Shahjehanpore and having been engaged in the affair from its commencement. Three other dacoits were also apprehended, making a total of five, and amongst them Saidhoo, an abeer, (lately in the service of Seeta Ram and Bunseedhur, bankers of Allahabad,) who gave the dacoits information of the wealth of the plaintiffs, and with them planned the dacoity.

It appears that this abeer, Saidhoo, (a native of Tanknie, pergunnah Shahjehanpore, district Goorgaon), was in

the employ of Seeta Ram and Bunsee Dhur, mahajuns of Allahabad, and stationed as a burkundaz in their godowns at Mirzapore; having constant communication with the servants of Dyal Dass of Sirsa, he became acquainted with the fact of their being very wealthy.

About three years previous to the dacoity, a noted Meena jemadar, named Chokla, visited Mirzapore, with half a dozen followers, putting up at the Nahur Ghât Serai. Here he became acquainted with Saidhoo, through Bheemla, sepoy in the Shekawattie Battalion; Chokla sought information from Saidhoo regarding any parties worth attacking, but unsuccessfully, until upon Saidhoo's return home in October, 1854, a message to the same purport being sent him, asking him also to join their expedition, he willingly consented to do so, and named the premises of Dyal Dass as likely to afford them a rich booty.

The dacoity thus planned became very popular from the reputed wealth of the intended victims; intelligence regarding it spread far and wide, and a large body of men speedily assembled, amongst whom were the relatives of the Ulwur Rajah's Meena jemadars.

They proceeded to their destination in five parties of from seven to eight in each, routes of three of which have been traced from the statement of the confessing dacoits. After assembling at Kishenghur Bass, one party passed directly south, through Ulwur, skirting part of Jeypore to Kerowlie, Gwalior, Koonch, Banda, and Allahabad. The second party also passed through Gwalior and Banda to Allahabad, and the third *vid* Agra. They remained a few days at Allahabad, during which Saidhoo took out the jemadars and leading men in two parties, and pointed out to

them the house to be attacked. After this they all assembled, on the day appointed, under a mowah and mango tree, in an urhur field, a short distance from Sirsa; but hearing that some European troops were encamped near the village, * they determined to postpone the attack until the nights were dark, it being at this time moonlight; one of the parties in consequence returned to the pucka Serai at Allahabad; another put up at the Nahur Gâat Serai, Mirzapore, under Gobardhun, one of their leaders; a third put up at Binda Chul in the Nowhara of Shibshunker, under Pudmulla jemadar. The two other jemadars, Chokla and Sookhdeo, hired a house in Mirzapore of a bunneea, in Bajee Rae-ka-Kuttra. In all these respective places they stayed about twelve or thirteen days, the leaders and chief men keeping up constant communication with each other.

* The camp of the Deputy Collector.

When the moon was on its wane,† the different parties having been duly warned, assembled for the attack on the same spot as before, leaving however three of their number behind at Allahabad who were laid up with boils. Saidhoo, Aheer, was of course absent likewise from fear of being recognized. The attacking parties prepared themselves for action in the usual manner, and took four loaded matchlocks with them.

† It was full moon the 3rd of January, 1855, last quarter on 11th, the night before the dacoity.

A small party of men stationed near the mahajun's door, which was open, fled on seeing the dacoits; the four matchlock men were left there as a guard, the rest rushing in to plunder. The zeena door was split open with axes by Roora and Daboo. After a short time the plunder-

ing party were called away, by their companions at the door, crying out to them to fly, as the mahajun's men were assembling to attack them. The resistance offered however must have been very slight, and the Police did not interfere.

I was most careful and minute in my inquiries as to the number of wounds received by any of the dacoits, as they of course afford strong proof against the persons on whom they are found, but I could only learn of two having thus suffered. One Nehala* was wounded accidentally by a sword from Sookhdeo jemadar, the second by name Bishna† made a cut at one of the mahajun's men, and received in return a slight wound across the back of his hand. However, little as was the resistance offered, it caused the dacoits to leave hastily. Returning to the field where they had left their camels, the jemadars mounting took with them the two wounded men, and after proceeding rapidly for about four coss they halted, searched every one and gave to each Rs. 3, from part of the plunder, telling them to disperse and return home. All succeeded in doing so without hinderance, except one of the camel men, who, unable to keep up with the others, carrying the plunder, fell in with a party of the Agra Police at mouzah Sirhendee, on the 22nd of January, and was stopped, but succeeded in making his escape.

* Bijwur, Shahjehanpore.

† Bijwur, Shahjehanpore.

The confessions prove the most of the dacoits on their return put up with the Ulwur Rajah's Meena jemadars, and this at the very time when Lieutenant Mason, Political Agent at Kerowlie, was at Ulwur, making every effort to track them out.

The camel left by Goberdhun in the hands of the Police at Sirhendee, being sent to Ulwur to be recognized, con-

vinced the dacoits that the Police were on the right track, when those in and about Shahjehanpore took an oath of secrecy from all, melting down and selling to the chief jemadars all recognizable property, and paying every share in money, each of these amounting to Rs. 53. Half shares were given to two old dacoits Jussa and Sewa, no longer able to earn a livelihood, and the usual allowance made for charity. The confessing dacoits declare that the thannahdars of Shahjehanpore, Kishengurh and Ratio received each their shares likewise of Rs. 42, 16, and 8.

A party of the dacoity Police on swift camels were sent to Shahjehanpore to arrest the dacoits, who however had fled, having received as I believe timely warning from the Rajah of Ulwur's Meena jemadars (natives of Shahjehanpore) when these latter left Ulwur, on receiving news of my arrival there.

The Shahjehanpore Police could give little or no information regarding the dacoits. Chokla, a chief jemadar and notorious character, well known throughout all Ulwur, for every Meena said he was a namdar, or famed man, and a great jemadar, appeared to be scarcely known by them; they said they knew but little about him, whereas it appears from the confessions of the dacoits that a large number of Meenas repeatedly assembled at Chokla's house in Shahjehanpore, and there in concert with Saidhoo, residing in the vicinity, planned the Sirsa dacoity.

Confession of Khana, Meena, Chowkeedar of Humeerpore in Ulwur.—I was concerned in the Sirsa dacoity. At the close of 1854 it was reported in my village that the Shahjehanpore Meenas were preparing for an expedition. I was starving, and therefore determined to join them. I saw

Chokla jemadar at Shahjehanpore, who told me to bring Rs. 5 for expenses, and I could then join the party. I returned home, but could not raise the money. I again went to Shahjehanpore; Chokla asked me if I had brought the money; I told him I could not procure it; he then advanced it to me as a loan, to be repaid from my share of the dacoity. We all met at Chokla's house in Shahjehanpore; the first night we slept at Burra Seraie, and were joined by two dacoits of that village. We put up at Navul Meena's (he is dead). At Kishengurh Bass we were entertained by Jewna, brother to Chokla; this man did not join us, but Jewna 2nd, Chokla's brother-in-law, with four dacoits from Gurhee Ram Seraie and two from Bass were waiting our arrival; we remained a day for our spy Saidhoo, Aheer, from Tanknie. Two dacoits from Bhatarie, one from Jalas, and one from Beejwara joined us here. From Bass we went to Khoodana and put up at Kooshala Meena's for the night, and then removed to the village Chowpal, where we remained two days, completing our arrangements. Three more of the Shahjehanpore dacoits here joined us; Chokla divided us into five parties or thokes. My thoke was under Pudmulla, and consisted of nine dacoits; we went by Nectar and Khera to Kerowlie, from thence to Gwalior, Kooneh and Banda to Allahabad. When all had assembled, it was determined to commit a dacoity on a rich mahajun's house at Sirsa. The aheer Saidhoo, who was a burkundaz, was our informer; he had been even to Calcutta and seen a great deal. Our jemadars led their thokes to the place of meeting, a field of urhur near a mowah and a mango tree; the leaders had heard that Europeans were encamped near Sirsa, at which we took fright and decided on defering the attack. Pudmulla took his division to Bindachul, near Mirzapore, and put up at the Nowhara of

Shibshunker Punda. The others were located in Mirzapore, but I never went there. We were under the orders of our jemadar. Zalim and Gopal were sent to Mirzapore to gain information; we were ordered to assemble at the same spot near Sirsa; the field I think was to the south of the house we attacked. Saidhoo, Aheer, burkundaz, was not with us. When we had completed our arrangements we left the four camels in charge of two of the party; we saw three or four men seated on a chowbootra in front of the door, but they fled; Chokla ordered Punna, Bishna, Rutna and myself to guard the door, whilst the rest entered to plunder; they remained an hour or more, when we saw people assembling to attack us; we kept firing our matchlocks to frighten them; those accustomed to it fired briskly, but as I was not sharp about it, Sookhdeo gave me a slap on my face, and I threw down the gun. We had a slight fight with the villagers, but as we had got all the plunder we went off. I do not know whether any of the men were killed; swords were drawn on both sides, and we had two wounded. Bishna said he made a cut at one of the mahajun's men, and received in return a sword wound on the hand. Nehalla was wounded by Sookhdeo, but by accident. When we reached the camels, we were all searched by our jemadars, the plunder was thrown on a cloth. I do not know what it consisted of, for it was too dark to distinguish; I saw bright looking cups and jewels; the booty was placed on the camels of Chokla and Pudmulla; Sookhdeo and Goberdhun also had camels, and they took the two wounded men with them. We received Rs. 3 from the jemadars, and were told to disperse; we went to the Ganges, bathed, and shaved off our whiskers, and otherwise disguised ourselves, and as pilgrims carried holy water, I was accompanied by Jhoontoo; we returned *vid* Banda, Koonch and Dholpore to Ulwur.

I there put up with Zoora, Meena, Jemadar in the Rajah's service, and Jhoontoo went to Sookhdeo, another Meena jemadar of the Rajah's. On our way home we overtook one of the dacoits, named Rutna, who was alone. We searched and found 8 pearls secreted on him; these I took and sold to Baxsee, son of Futteh, of Hursora. Chokla jemadar travelled as Moti Singh, Chowhan Thakoor of Jeypore, and Sookdeo was called Buldeo Singh Thakoor; they passed as great men. Goberdhun was seized with his camel by the Police, but he got away, leaving the animal in their hands. After being at home six weeks, I heard that the plunder was to be divided at Chokla's house at Shahjehanpore, and thither I went. When we had assembled, Chokla said he had sold the silver ornaments, and produced a gold necklace, three gold bracelets and a nuth, he asked if they were to be sold, broken up, or divided; it was decided to sell them. A jeweller of Shahjehanpore, whose name I do not know, but he was 40 or 45 years old, bought the necklace, and the dacoits bought the rest of the jewels; there were 50 shares of Rs. 53 each, the three jemadars got half share each extra, and Saidhoo, the Aheer burkundaz, the like; also a share each for the 4 camels; two shares for charity; one share divided between Jussoo and Sewa, two Meena dacoits of Shahjehanpore, too old for work; and one share for the Police. I do not know the names, but I heard that the thannahdar of Shahjehanpore was to receive Rs. 42, the thannahder of Kishenghur Bass Rs. 16, and that of Ratie, Rs. 8.

Confession of Saidhoo, Aheer, of Tanknie, pergunnah Rewarie, Zillah Goorgaon.—I was not present at the Sirsa dacoity, but pointed out the house to be attacked. The fact is, I was a burkundaz in the employ of Bunseedhur and Seeta Ram, and was posted at their godowns at Mirzapore. Some three or four years ago, Chokla jemadar, with his

followers, put up at the Nahur Ghât Serai at Mirzapore. I got acquainted with him through Bheemla, a sepoy of the Shekawatee Battalion, then cantoned at Mirzapore. I was asked to point out some house where rich booty could be had, but I refused to aid the dacoits. The following year I returned home on leave: I reside near Shahjehanpore. Chokla sent for me in October, 1854, and persuaded me to join in a dacoity expedition. We decided to go east, as I had told them that at Sirsa there was a wealthy merchant, named Dyal Dass. I found a number of Meena dacoits assembled at Chokla's house at Shahjehanpore; he sent four dacoits with me. I took Rs. 4 for expences on the road; we put up with Jewna, brother of Chokla, at Kishunghur Bass. My party went through Agra to Etawah, and so to Allahabad, where we put up at the pucka Serai; the next morning I took Nehala to Sirsa, and pointed out to him the house to be attacked. Nehala remained the greater part of the evening, looking at the premises. We slept that night at a bunneea's near Dyal Dass's house, and told him we were going to Mirzapore. On our return to Allahabad, Nehala took Pudmulla jemadar to Sirsa, and then we all assembled in an urhur field, near Dyal Dass's house. Chokla had heard that there were Europeans encamped near Sirsa, so it was decided to defer the dacoity. A few of the dacoits returned to Allahabad. Pudmulla, with ten or twelve of them, went to Bindachul, a party put up at the Nahur Ghât Serai, and I went with Chokla and Sookhdeo, jemadars, to the city of Mirzapore; we hired a house in Bajee Rae-ka-Kuttra; said we were on pilgrimage to Gya Jee, but intended remaining at Mirzapore some fourteen or fifteen days. The jemadars' two camels were tied at the door. Whilst there, Hookma, an Aheer of Tanknie, who was a sepoy in the Shekawatee Battalion, came twice to see me; he knew we were dacoits.

When the jemadars had decided on leaving for Sirsa, I went back to my old post at the godowns of Bunsee Dhur. I was told that I had only four months' leave, which I had overstayed, and I could not be again employed; I remained a few days with Kalka Brahmin, a burkundaz in the Seith's employ, and there heard of the Sirsa dacoity. I went to Allahabad, and from thence home *vid* Etawah and Agra. Soon after my arrival at Tanknie, I went over to Shahjehanpore, but heard that all the dacoits had gone on holy pilgrimage to Hurdwar. Six months after this, I met Chokla at Shahjehanpore, and asked him for the share and a half promised me for the information given, but he said that the little gained by the Sirsa dacoity had been spent, and promised to give me my share from the next. No, I was never engaged before in dacoity, and got nothing for this one. I am very miserable, and will never again have anything to do with dacoits. I know the Shahjehanpore Meenas, and name those who were in the Sirsa dacoity, I do not know the names of Meenas from other villages.

Confession of Buldeo, Meena, chowkeedar of Jalas in Ulwur.—Yes, I was concerned in the Sirsa dacoity; I live close to Shahjehanpore, and in October, 1854, heard that the Meenas of that village were preparing for a dacoity expedition; I went to the chief jemadar, Chokla, and found eleven dacoits assembled at his house with Saidhoo, an Aheer burkundaz; this man told the jemadars of a rich banker in Sirsa, whom it was decided to plunder; I was told to bring eight Rupees for my expenses, and to be present on the 6th December at the house of Jewna, brother of Chokla, who resided at Kishenghur Bass. I found on my arrival, that most of the party had gone on to Kodena, and I joined them there; I was placed under Sookhdeo

jemadar, with a party of seven, and ordered to proceed *vid* Dholepore and Gwalior to Banda, and put up at a Serai, a mile from Allahabad, to await the assembling of the whole gang, which consisted of 39. Our jemadars were Chokla, Sookhdeo, and Pudmulla; we gave out we were Thakoors, going east for service. Sookhdeo was called Buldeo Singh, he rode on a camel, and we treated him with great respect, pretending we were his followers; we crossed the Jumna by a boat, and on reaching the Serai, found Pudmulla's party located there; we heard that Saidhoo had gone with Nehala to Sirsa, and that the latter would point out the rendezvous to our party. Nehala conducted us to a field of urhur, near a mowah and mango tree, where we smoked; we then heard from Chokla that Europeans were encamped near Sirsa, and it was therefore decided to defer the attack. Chokla sent Nehala with four dacoits back to Allahabad. Pudmulla jemadar was ordered with his party to Bindachul, and Goberdhun with seven dacoits, including myself, were directed to take up our quarters at the Nahur Ghât Serai; we remained there some thirteen or fourteen days; after the third or fourth day we heard from Goberdhun, that Chokla and Sookhdeo with the rest of the dacoits were residing in a house, a short distance from us. We seldom went out, as Goberdhun told us to keep quiet; he used to see Chokla and Sookhdeo. We gave our names to the bhuteearas of the Serai, I do not recollect their names, except that of the girl, which was Jumnea; she was seven or eight years' old, had an elder sister, a father and a mother living in the house. Goberdhun's camel we tied to a neem tree, near the bhuteeara's house; we said we were Thakoors on pilgrimage. We got orders from Chokla to assemble at the same place near Sirsa. I was sent to warn the dacoits at Bindachul. We found all the gangs assembled at the urhur field, with

the exception of Saidhoo, Aheer, burkundaz, and three dacoits, who were laid up with boils at Allahabad. Our four camels were left in charge of two of the party, and we prepared for the attack, girding up our loins. Four of the dacoits with lighted matchlocks and the three jemadars with drawn swords were in front; we followed, and on reaching the large door to the west of the banker's house shouted out. Hearing us the guard at the door fled, and we placed our matchlockmen to keep watch, whilst the rest of the gang rushed in to plunder. Sookhdeo remained with the matchlockmen at the door; he had prepared two large wicks of cotton, and we had a lotah of oil; we found a door at the zeena, but it was split open with axes by Roora and Daboo. I got a large bag of rupees, but do not know how much was in it; one gold and a pair of silver bracelets, nine hauths of longcloth, and fifteen of doputta. We heard a disturbance going on outside, and were called down; but lingering, Sookhdeo came up and told us to fly, or we should be killed, as the villagers were assembling to attack us; he took from us the bag of money and the bracelets, but allowed me to keep the cloth. I got out by the small door, and heard that the swords had been used. I saw that Bishora and Nehala had been wounded. The former had a sword cut on the back of his left hand. I heard him say he had made a blow at one of the mahajun's men and got the cut in return. Nehala was wounded accidentally by Sookhdeo, jemadar. I saw some of the banker's guards as I left the house, but could not distinguish if any were wounded owing to the confusion and darkness. We fled to the camels, the jemadars mounted, and after going about eight or nine miles we halted, and were searched by the jemadars, the plunder was thrown on a sheet, there appeared a great deal of it, yellow and white shining things, but

the jemadars would not allow us to go near; it was then packed and placed on the camels ridden by Chokla and Pudmulla; the two wounded men were placed on the other two camels; we each received Rs. 3 from our jemadars, who told us to disperse to our homes, if it pleased Ram to take us in safety. The first two or three days we travelled long distances and then proceeded leisurely *viâ* Gwalior to Ulwur. I did not go to a Serai there, for seven other dacoits of our party were living with Sookhdeo, a jemadar in the Ulwur Rajah's service. The jemadar commanded the guard at the Bhoomea gate, and I lived there. I went twice to Shahjehanpore about the division of the plunder, but was told that as the guards of Dacoity Department were in search of dacoits, it had all been secreted by the jemadars. I met Goberdhun at Ulwur, who told us he had been seized by the Police, but had got away, leaving his camel and sword behind. I felt sure we should be discovered by this means and again went to Shahjehanpore. Chokla said that Pudmulla had taken a third of the plunder for the share of his party, and there were two shares left for the two other thokes. Some of the gold jewels were sold to a jeweller, and others to Dhumoo, Meena, jemadar of Shahjehanpore. My share account is as follows:—I received Rs. 42 cash; Rs. 9 was put down for expenses (I only took Rs. 7 with me and others took Rs. 8); Rs. 2 was charged for clothes supplied to make us appear respectable men seeking service. One rupee was charged for the cloth I kept, and two small beads of thin gold were given to me. Chokla arranged about the shares, taking the dhurm of the dacoits, (we stated on oath,) we had not secreted anything. Each man got a share, the jemadars an extra one; they got more than half a share. Our spy, Saidhoo, got half a one also, the camels were allowed each a share, and one share was divided between Sewa and

Jussa, Meena dacoits, too old to work; there was the usual share for charity. Yes, we gave two shares, and a certain sum was put apart for the Police. The jemadar paid the thannahdars of Shahjehanpore, Kishengbur Bass, and Ratie. My father is now very old and blind. Yes, he was a famed dacoit in his day, but that is now past and gone. I have committed other dacoities—one in Malwa and another in Kora Jehanabad; it is now some time ago, so I cannot relate the particulars.

HANSIE DACOITY.

On the night of the 23rd January, 1855, a daring dacoity was committed in the town of Hansie by a band of Meenas, consisting of 29 men, headed by the sons of the famed Girdharie, *alias* Gheeda, who was one of the most noted of Meena leaders in 1832.

The information was derived from a Goojur named Likhoo, whose father-in-law resided near Hansie. Omens were taken, which proving favorable, an attack was made on the doomed house and succeeded. The dacoits escaped, (a party of the Customs Police, in search of contraband salt, probed the camel bags in which the booty was concealed,) and had even reached the Native States, where they deemed peril was past; but the energy of the Magistrate of Hissar had tracked them, and caused the arrest of two leaders and a portion of the band. Two others were seized by the Agra Police, and convicted of the dacoity. By the statement of Nanga, a brother of the leaders, it appears that these two men had been convicted under false names; that a party of suspected men made over to the Ruler of Jeypore, were implicated in this affair, and amongst them the informer Likhoo; that the relatives of Shewdaneea, an approver in the Dacoity

Department, were actively engaged in dacoity. Kisna, a Meena, concerned in the Doora dacoity of the 23rd November, 1854, was two months afterwards engaged in that of Hansie, thus proving himself a regular dacoit.

Deposition of Nanga, son of Gheeda, Meena; age 27, resident of Powanah, Jeypore.—I was engaged in the Hansie dacoity; my brothers, Buldeo and Dhana, were the jemadars; there were 29 dacoits with 13 camels; Laikhoo, son of Hookma, Goojur of Raishorepoora of Patun, was the spy; his brother-in-law's house is two coss from Hansie; on visiting the city he saw there the house of a mahajun, the owner of which, as he told Dhana, jemadar, was said to be wealthy, and that the house should therefore be plundered. Dhana replied that omens ought first to be taken, which was done by Shewjee, with the partridge omen; it proved favorable and the dacoits assembled at the house of Bhyro, in Doongur Nagul.

The first day from Doongur Nagul to Goree in Khytree.

Second day to Seetamee in Jhujjur.

Third day to a village, fifteen coss from Jhujjur.

Fourth day to Bhowanee in Rohtuck.

The fifth day to a village, twelve coss from Hansie, and put up at the Brahmin's chowpal.

The sixth day to Hansie which we entered about 10 P. M. Laikhoo, Goojur, led the dacoits to the mahajun's house, the doors were locked, but were broken open with axes, and we hurried off with the plunder.

Dhana and Buldeo, jemadars, with six dacoits and five camels, were seized at Naloot; one dacoit escaped with one camel, leaving four camels and seven dacoits, namely, Buldeo, Dhana, jemadars, Shewjee, Jewna, Godha, Heera, Jewna 2nd. These are now in Jail at Agra; my two brothers, Buldeo and Dhana, when tried, gave false names. We are the sons of the famous Girdharee, *alias* Gheeda, and therefore do not give our own father's name. Laikhoo, Goojur, Godh Singh and Punna, who were sent to Jeypore, were in the Hansie dacoity. The relations of Shewdania commit dacoity, but he shields them. The plunder was divided at Doongur Nagul, Neem-ka-thannah in Patun. The share of each dacoit was Rs. 15 cash, five gold coins and eight of silver. The shares of the seven dacoits apprehended at Naloot were sent to their homes.

LOODIANA DACOITY.

On 30th January, 1856, a dacoity was committed in the house of a banker in the town of Loodiana.

No trace of the perpetrators of this outrage could be discovered *till* towards the close of the year, when a Meena, named Hunwunta, deposed to the Meenas of Shahjehanpore having committed this dacoity. The Police of the village being in the pay of dacoits, it was difficult to gain reliable information; parties of the dacoity Police were therefore disguised as faqueers, and resided in its vicinity; they thus learnt secretly from Kesla, sonar of Shahjehanpore, that in the beginning of 1856, much plundered property was brought into the village by dacoits; that it was kept secreted in the houses of Ram Dial, Diakeshun, and of a sonar named Ras Dhurum. When the dacoity guard were at Hursoora in search of the Sirsa dacoits, the Shahjehanpore Meenas fled; Daboo and Dhoonkul,

jemadars, remained to watch the property, which was divided a month after the dacoits returned from Loodiana. Whilst in Ulwur in January, 1856, I learnt that a party of Meenas had left Shahjehanpore on a dacoity expedition, but it was supposed that they had gone south. Feeling convinced that Hunwunta was on the right track, a party of dacoity Police with approvers was ordered in April to proceed to Shahjehanpore, and had reached Meerut, when the revolt that broke out there on the 10th May, 1857, temporarily closed the proceedings.

Deposition of Hunwunta, son of Punnah, Meena, of Chota Seraie.—I reside near Shahjehanpore, and have often been there. It was well known in the village that Dhoonkul and Daboo, jemadars, with their Meenas, committed the Loodiana dacoity. I also heard of it from Mana and Buldeo, who had a quarrel with Dhoonkul regarding the division of the spoil; it was divided in Dhoonkul's house in February, about a month after the dacoits' return. I heard that they got a great deal of plunder. I do not however know how much; I heard it was money and jewels, for they had plundered the house of a shroff. No one but the Shahjehanpore Meenas were concerned in the Loodiana dacoity; I do not know how many were engaged, but know some of the leading men. Daboo and Dhoonkul had camels.

In the Police Register these men are down as at their homes, when they were absent on this expedition; they however remained to watch the property when the other Meenas fled on the dacoity guard coming to Hursora. The Meenas remained quiet in their homes till they heard of the dacoity guard being near, when they hid in the jungles. Mana, jemadar, died of cholera in July last.

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